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An Assessment of the Supplies of Natural Gas and Fuels for Generating Electricity in Ohio From November 1980 - October 1981

Presented to

Governor James A. Rhodes

Ohio Legislature

Public Utilities Commission of Ohio

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Ohio Department of Energy
Robert S. Ryan, Director

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and Fuels for Generating Electricity in Ohio
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AN ASSESSMENT OF THE SUPPLIES OF NATURAL GAS AND FUELS FOR GENERATING ELECTRICITY IN OHIO

SUMMARY

Section 4905 of the Ohio Revised Code requires that on July 1 and November 1 of each year Ohio's natural gas and electric utilities report to the Ohio Department of Energy (ODOE) forecasts of their projected fuel supply and demand for the ensuing twelve-month period. The statute further requires that the Ohio Department of Energy review each report and compare it to the department's independently generated forecasts. This report represents ODOE's assessment of these individual forecasts and provides an aggregate forecast of Ohio's natural gas and electricity supply/demand outlook for the period November 1980 through October 1981.

Electricity

Consumption of electricity in the state declined in the twelve-month period ending October 1980, as it had the previous year. Consumption was down 2.4 percent compared to the year ending October 1979. The main causes of the decline could be attributed to public conservation and the reduced production in automobile-related industries and also the steel industry. The latest industrial consumption data show a slight upturn that may signify the beginning of recovery. Complete recovery of industrial demand, however, would not likely occur before May 1981. The residential and commercial sectors have indications of continuing growth. Provided there are no major economic disruptions, the state's total electric demand is forecast to be about 4 percent above the past year's low level of consumption.

The projected supply of coal and oil for electricity generation is adequate under normal circumstances. Since the United Mine Worker's

contract will expire in March 1981, a higher than normal level of coal inventory is encouraged by the Ohio Department of Energy to all coal-using facilities, particularly electric utilities.

Natural Gas

Available supplies of interstate natural gas have stabilized over the course of the 1978-1979 and 1979-1980 heating seasons, due to the impact of the Natural Gas Policy Act of 1978. The Act deregulated the price of some interstate natural gas immediately, and mandates the deregulation of all interstate natural gas by the end of 1985. It is anticipated that the supply of interstate natural gas will be adequate. Even if the current disruption of supply of Algerian LNG were to continue through the heating season, Ohio consumers will have enough natural gas. In the event of 10 percent colder than normal weather, a minor deficiency may result. Even that deficiency can be met by the purchase of emergency natural gas and by the encouragement of additional conservation measures.

INTRODUCTION

This report has been prepared by the Ohio Department of Energy pursuant to Section 4905.14(E) of the Ohio Revised Code. The statute requires the Department of Energy to provide a summary, analysis and recommendations based on the Ohio public utilities' energy supply and demand projections for the twelve-month period beginning November 1, 1980. In accordance with Section 4905.14(D), a copy of each utility's November forecast was submitted to the Governor, the Clerk of the Senate, the Legislative Clerk of the House of Representatives, and the Public Utilities Commission of Ohio on November 10, 1980. The utilities' forecasts and historical data are the primary input for this report. Several other sources of information have also been used - i.e., historical energy data developed by the Ohio Department of Energy, federal energy reports, publications from the American Gas Association, publications from the Electric Power Research Institute, and others. A substantial and successful effort has been undertaken to develop a comprehensive data base and at the same time maintain the ability to provide timely analyses and forecasts.

Objectives

In the preparation of this report, the Ohio Department of Energy set forth the following major objectives:

1. To provide an adequate historical, energy-related data profile for identification of current status and future trends;
2. To provide analysis and interpretation of changes in energy supply and demand;

3. To provide an independent assessment of the adequacy of natural gas and electric energy supply for the upcoming twelve months; and

4. If a potential deficiency between supply and demand is identified, to suggest a strategy to prevent or mitigate any interruption or curtailment of service.

These objectives are addressed specifically under the sections of electricity and natural gas presented later.

Energy Supply Outlook

The utilities have projected an adequate supply of coal and fuel oil for the generation of electricity for the next twelve-month period. The projected supply of coal for electricity generation is higher for each month through March 1981 for most of the utilities. As of March 1981 many utilities estimate over ninety days' coal supply, the recommended level in the event of a potential supply disruption. Anticipation of a potential coal strike resulted in this coal supply buildup. Some utilities have projected reduced coal deliveries and stocks after March 1981. In each case, projected days' supply of coal of utility groups is over seventy days. The Ohio Department of Energy will encourage all electric utilities to achieve a ninety-day supply of coal, unless there is strong indication of a strike settlement prior to March 1981.

The supply of oil for electricity generation is projected to be lower than that used the preceding year. Fuel switching and conservation by the utilities have resulted in an equal reduction in fuel oil consumption during the first nine months of 1980. Given that the utilities have demonstrated an ability to cope with lower supply levels of fuel oil, it appears that sufficient supplies of fuel oil are available for electricity generation.

Utilities' natural gas supply projections for the next twelve months indicate an increase of 7.7 percent over one year ago. However, projections by Columbia Gas of Ohio do not take into account the current disruption in deliveries of Algerian liquefied natural gas (LNG). Even if supplies of LNG continue to be cut off, there will be 6 percent more natural gas supply than was available in the preceding year. The supply disruption stems from Algeria's demand that the price of LNG established by the current contract be tripled. Negotiations are proceeding, and it currently appears that an agreement is near. Even if the winter is 10 percent colder than normal, and an agreement on LNG does not materialize, it is unlikely that any curtailment of natural gas deliveries will be required. The probability of any supply deficiencies is minimal because historical data show a declining demand for natural gas in the residential, commercial and industrial sectors.

Temperature and Energy Consumption

In studying short-term energy consumption behaviors for the three major sectors of consumers (i.e., industrial, commercial and residential), the observed changes in the sectoral annual energy requirements may be explained by a variety of causal events. Temperature is a variable, which explains much of the observed variation. It is particularly important in the residential and commercial sectors where, during summer and winter periods, the requirements for electricity and natural gas are used to maintain comfortable room temperatures.

Two indicators which measure temperature sensitive energy requirements are heating degree-days and cooling degree-days. The daily mean temperature is obtained by adding together the maximum and minimum temperatures reported for the day and dividing the total by two. This average is subtracted from 65°F. When the daily mean temperature is 65°F or more, the degree-day is

zero. Each degree of mean temperature below 65°F is counted as one heating degree-day. This indicator is convenient because the amount of heat required to maintain a certain temperature level is proportional to heating degree-days.

The cooling degree-days are defined similarly: Each degree of mean temperature above 65°F is counted as one cooling degree-day. If the daily mean temperature if 65°F or lower, the cooling degree-day total is zero.

Since most homes and commercial buildings in Ohio are heated by natural gas, the reporting utilities are required to submit supply and demand forecasts under a "normal winter" scenario and a "10 percent colder than normal" winter scenario. In addition, the relationship between natural gas consumption and heating degree-days is closely monitored by ODOE during the winter heating season (from November through March). Table 1 and Figure 1 show population-weighted state heating degree-day summaries for the past two heating seasons. In addition, a normal heating degree-day series, defined as the 30-year average of the years 1941 to 1970, is presented.

Rules and Requirements for This Report

The administrative rules and forecasting requirements (OAC 1551:1-4 and 1551:1-5) became effective November 1, 1978. The present forecasting reports submitted by electric and gas utilities are in accordance with these rules.

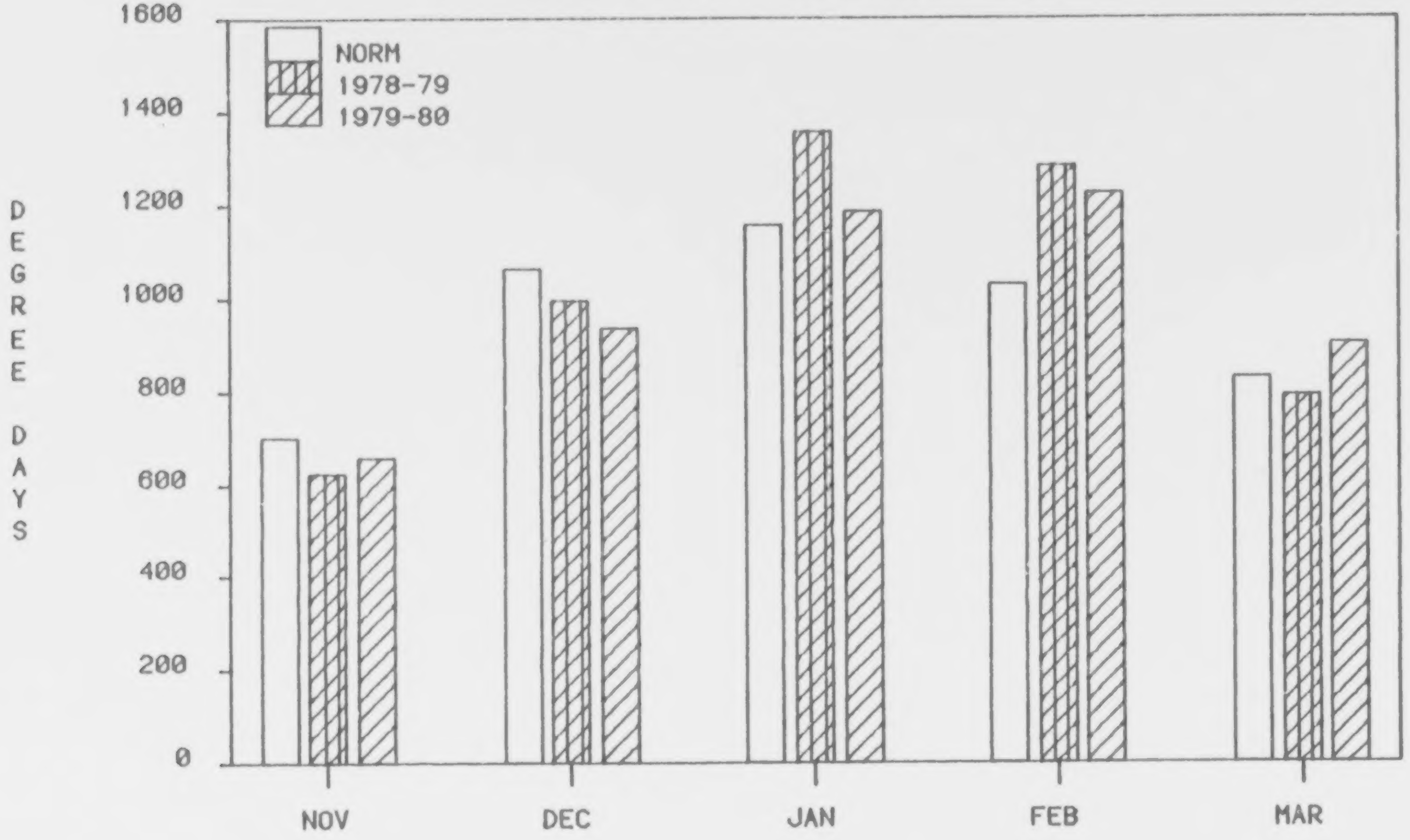
It is necessary to differentiate between state energy consumption and production totals and the reporting utilities' totals. This is because the municipal utilities, industrial facilities, and the rural electric cooperatives are not required to file the semi-annual report. This difference is actually very small (estimated to be about 6 percent for the electricity figures and 0.5 percent for natural gas, excluding self-help gas).

Table 1. Population-Weighted State Heating Degree-Days
(Winter 1979-1980)

Week Ending Date	1979-1980			Norm		
	Weekly	Cum. for Month	Cum. from Nov.1	Weekly	Cum. for Month	Cum. from Nov.1
Nov. 4	67	67	67	69	69	69
11	167	234	234	141	210	210
18	173	407	407	162	372	372
25	97	504	504	183	555	555
30	151	655	655	146	701	701
Deviation from Norm		-6.6%	-6.6%			
Dec. 2	61	61	716	58	58	759
9	208	269	924	223	281	982
16	194	463	1118	239	520	1221
23	220	683	1338	250	770	1471
30	213	896	1551	256	1026	1727
31	38	934	1589	37	1063	1764
Deviation from Norm		-12.1%	-9.9%			
Jan. 6	226	226	1815	224	224	1988
13	273	499	2088	261	485	2249
20	198	697	2286	262	747	2511
27	287	984	2573	261	1008	2772
31	203	1187	2776	149	1157	2921
Deviation from Norm		2.6%	-5.0%			
Feb. 3	153	153	2929	111	111	3032
10	315	468	3244	257	368	3289
17	307	775	3551	252	620	3541
24	206	981	3757	243	863	3784
29	244	1225	4001	164	1027	3948
Deviation from Norm		19.3%	1.3%			
Mar. 2	97	97	4098	66	66	4014
9	234	331	4332	214	280	4228
16	215	546	4547	197	477	4425
23	168	714	4715	177	654	4602
30	169	883	4884	156	810	4758
31	19	902	4903	19	829	4777
Deviation from Norm		8.8%	2.6%			

Source: National Weather Service, Port Columbus; and the Ohio Department of Energy.

FIGURE 1. POPULATION-WEIGHTED STATE DEGREE-DAYS FOR OHIO
WINTER HEATING SEASONS 1978 - 1980



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Ohio Department of Energy Forecasts

As part of its analysis, the Ohio Department of Energy makes independent forecasts to serve as validation checks. Early identification of severe conditions permits advanced planning to avert possible undesirable consequences.

The independent monthly demand forecasts by utility and for the state as a whole are obtained by using modern time series analysis and forecasting techniques. The quality of independent forecasts may be evaluated by comparing the actual versus the forecast. In most cases, the error level is within a plus or minus 5 percent range. Forecast errors of more than 5 percent can usually be attributed to abnormal temperatures and/or economic conditions. Neither of these variables can be predicted accurately, given the present state of forecasting techniques. The present forecasts are based on the past ten years monthly actual consumption of both electricity and natural gas and other appropriate variables such as population, income, and temperature data. As in any forecast, certain important socio-economic conditions are assumed in the Ohio Department of Energy forecasts. These assumptions are:

1. Energy demand generally follows its historical consumption pattern.
2. Socio-economic changes are minimal in affecting demand for energy in the short run.
3. The observed level of conservation will remain in effect.
4. Other specific assumptions are stated where appropriate.

Overview of This Report

The rest of the report is divided into two parts: electric energy and natural gas. Materials contained in these two parts are, for the most part, parallel in arrangement. They contain: (a) a profile of reporting

utilities; (b) historic sources of supplies/suppliers; (c) consumption history by sector, utility, and state; and (d) the utilities' forecasts and independent forecasts by the Ohio Department of Energy. For the purpose of better illustration, the data are frequently displayed graphically.

ELECTRIC ENERGY

This section is based on the November forecasts filed by five groups of the major Ohio electric utilities. These groups are:

1. CCD - Cincinnati Gas and Electric Company (CG&E)
   Columbus and Southern Ohio Electric Company (C&SOE)
   Dayton Power and Light Company (DP&L)

2. CAPCO - Cleveland Electric Illuminating Company (CEI)
   Ohio Edison System (OE) (and its subsidiary Pennsylvania Power)

3. American Electric Power Company (AEP)
   Ohio Power Company (OP)
   Columbus and Southern Ohio Electric Company (C&SOE)
   Other out-of-state utilities not subject to reporting

4. Allegheny Power System (APS)
   Monongahela Power Company (MP)
   Other out-of-state utilities not subject to reporting

5. Ohio Valley Electric Corporation (OVEC)

The utilities within groups 1 and 2 own many power generation units in common. These jointly-owned units are usually operated by the utility having the largest ownership share. The electric energy generated from such units is distributed to the utilities according to ownership share percentages. Thus, in making an electric fuel assessment, it is not only important to review an individual utility's level of supply but also the level of supply as a group.

Groups 3 and 4 are holding companies of many utilities. Each group has a centralized power generation and distribution center that coordinates generation for the entire system. Given these circumstances, the emphasis of fuel assessment has been placed on the entire system.

Group 5 is a single purpose utility: Its main function is to supply power for the uranium enrichment plant at Portsmouth. However, it does sell surplus capacity to many publicly owned utilities.

Although the Columbus and Southern Ohio Electric Company is now a member of the AEP system, its power generation and distribution have not yet been integrated with the AEP central system. Therefore, in this report, Columbus and Southern Ohio Electric is still treated as a member of the CCD group.

Source/Supplier of Fuel for Electric Generation

Fuels used in Ohio for electricity generation include coal, oil, natural gas, and nuclear fuel. At this time, nuclear fuel is not monitored by ODOE; all other fuels are monitored through the utilities' monthly reports. Tables 2 and 3 list coal and oil deliveries to power plants located in Ohio. These totals are illustrated graphically in Figures 2 and 3. The main sources of supply and/or suppliers of these fuels remain the same as in the last reporting period.

The amount of coal and oil deliveries to Ohio plants in the first nine months of 1980 was lower than during the same period in 1979. The particularly sharp decline in oil deliveries is indicative of Ohio utilities' efforts at reducing oil consumption.

Electric Generation by Type of Fuel

Coal is the main source of fuel for electricity generation in Ohio, and its position is not expected to change in the foreseeable future. In 1979, 96 percent of total electricity generated in Ohio was from coal, an increase of 1 percent over the year before; oil-generated electricity accounted for 1 percent, a reduction of 1.6 percent; and nuclear generated electricity accounted for 3 percent, an increase of 1 percent. The amount of electricity generated from natural gas is very small compared to total generation. A second nuclear plant, the Zimmer plant owned jointly by the member utilities of the

Table 2. Source of Coal Supplies to Electric Utilities
(Ohio Portion)

(In Thousand Short Tons)

	Coal Districts								
Month	1	2	3	4	6	7 & 8	9	Other	Total
1978									
January	4.8	52.2	11.5	137.4	7.2	275.9	1.4	169.0	659.4
February	8.3	51.1	9.7	153.8	0.7	316.3	---	257.8	797.7
March	20.1	173.3	52.0	1,057.9	11.7	624.0	1.6	619.8	2,560.4
April	35.8	187.2	88.6	2,834.4	263.3	828.0	111.5	525.5	4,874.3
May	21.0	261.4	111.9	2,906.4	321.0	944.2	121.5	494.4	5,181.8
June	18.3	260.1	107.4	2,993.4	257.0	1,067.3	140.6	416.9	5,261.0
July	25.1	353.6	86.1	2,292.5	174.8	1,059.9	119.3	475.4	4,586.7
August	10.2	141.2	58.1	1,946.6	217.2	1,030.8	155.7	472.8	4,032.6
September	18.0	207.9	86.1	2,361.7	234.8	921.2	129.9	283.4	4,243.0
October	51.5	200.7	98.3	2,608.1	310.3	998.1	112.5	179.5	4,559.0
November	41.1	185.4	77.1	2,627.0	230.9	1,197.9	156.8	314.9	4,831.1
December	12.9	145.5	73.1	2,290.5	223.5	1,121.2	75.3	338.3	4,280.3
Total	267.1	2,219.6	859.9	24,209.7	2,252.4	10,384.8	1,126.1	4,547.7	45,867.3
% of Total	0.6	4.8	1.9	52.8	4.9	22.6	2.5	9.9	
1979									
January	----	176.9	45.2	2,296.6	241.5	1,026.7	129.6	392.0	4,308.5
February	5.7	103.4	52.7	2,124.4	237.9	901.7	124.5	285.6	3,835.9
March	.5	158.0	60.4	2,516.0	313.8	1,172.8	149.4	231.7	4,602.6
April	32.6	143.3	76.7	2,207.3	276.0	1,405.5	107.7	334.0	4,453.1
May	3.0	106.8	75.4	2,425.0	358.0	1,340.1	143.2	371.0	4,822.5
June	10.2	120.7	83.1	2,369.5	356.3	1,336.7	135.8	388.8	4,801.1
July	6.5	105.7	62.6	1,874.7	178.7	785.2	134.6	425.0	3,573.0
August	6.5	81.2	68.0	2,469.7	295.3	1,242.4	196.2	333.5	4,692.8
September	1.0	148.1	75.5	2,229.4	285.5	1,171.9	92.0	309.8	4,313.2
October	1.0	100.1	63.2	2,382.9	484.5	1,228.1	112.6	296.6	4,669.0
November	.5	162.4	25.4	2,263.8	286.4	1,398.2	128.4	251.1	4,516.2
December	----	158.9	17.6	2,099.3	289.9	1,370.7	120.7	29.5	4,086.6
Total	67.5	1,565.5	705.8	27,258.6	3,603.8	14,380.0	1,574.7	3,648.6	52,804.5
% of Total	0.1	3.0	1.3	51.6	6.8	27.2	3.0	6.9	
1980									
January	----	210.9	27.0	2,202.8	327.2	1,140.8	131.5	316.8	4,357.0
February	----	136.3	46.9	1,872.3	500.9	964.9	100.1	216.8	3,838.2
March	----	200.4	34.8	2,114.1	126.9	1,485.5	94.6	356.6	4,412.9
April	----	254.1	44.7	2,096.0	215.9	1,216.8	66.1	200.8	4,094.4
May	.1	165.1	49.0	2,225.2	270.1	1,252.5	125.4	167.8	4,255.2
June	----	158.4	56.5	2,111.3	291.9	1,501.7	159.0	165.4	4,444.2
July	----	151.3	47.1	1,932.9	173.1	892.3	72.8	201.3	3,470.8
August	----	182.6	78.8	2,164.6	261.6	1,295.8	115.1	242.1	4,340.6

District

1. Eastern Pennsylvania
2. Western Pennsylvania
3. Northern West Virginia
4. Ohio
6. Panhandle in W. Virginia and Ohio
7. Southern No. 1 (in W. Virginia and Virginia)
8. Southern No. 2 (in W. Virginia, Virginia and Eastern Kentucky)
9. Western Kentucky

Other - Primarily from Wyoming and Utah

(For details, see Keystone Coal Industry Manual, 1977 by McGraw Hill)

Source: Ohio Electric Utilities' FPC Form 423 and the Ohio Department of Energy.

FIGURE 2. MONTHLY COAL DELIVERIES TO POWER PLANTS IN OHIO
(JANUARY 1978 - AUGUST 1980)

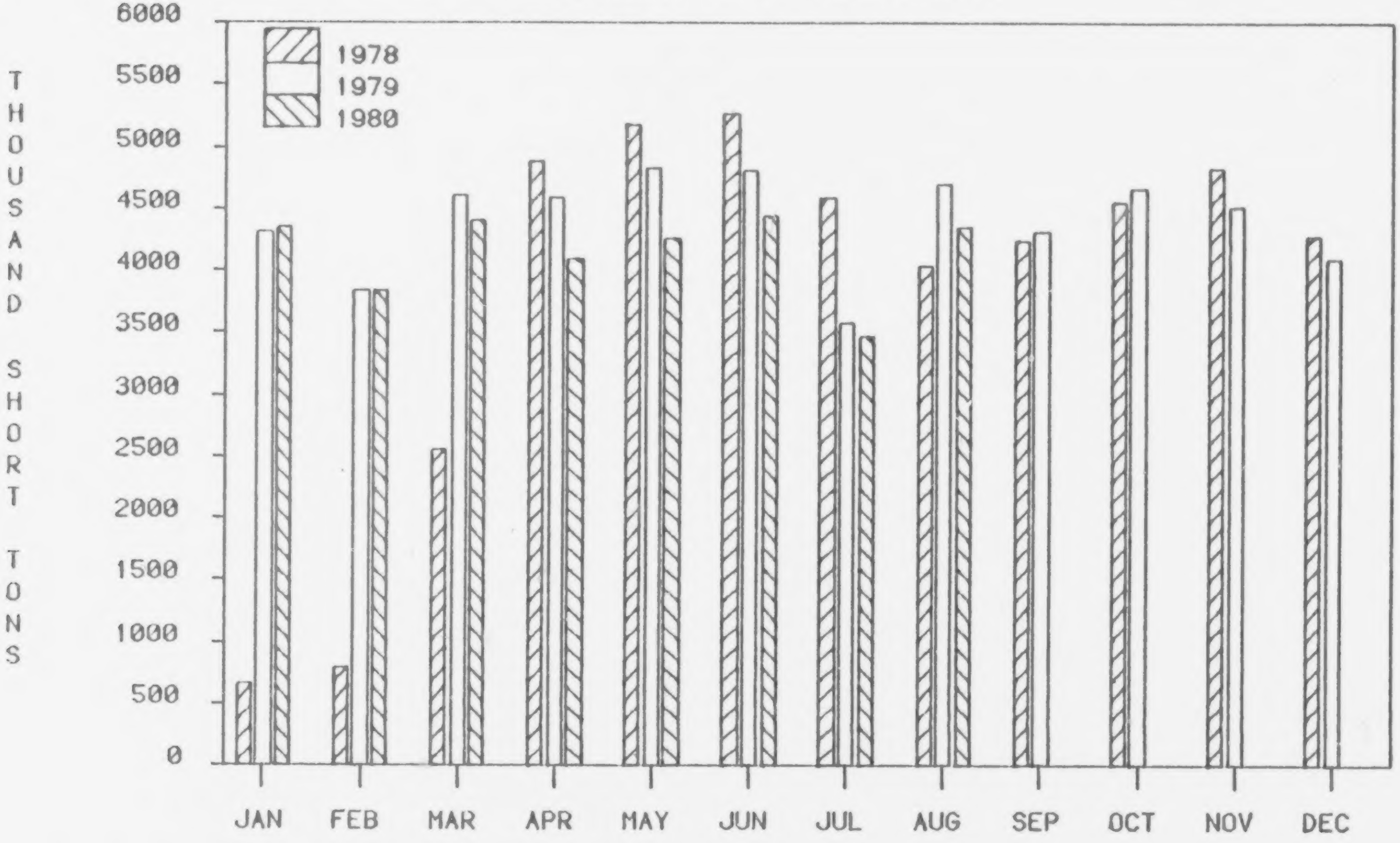

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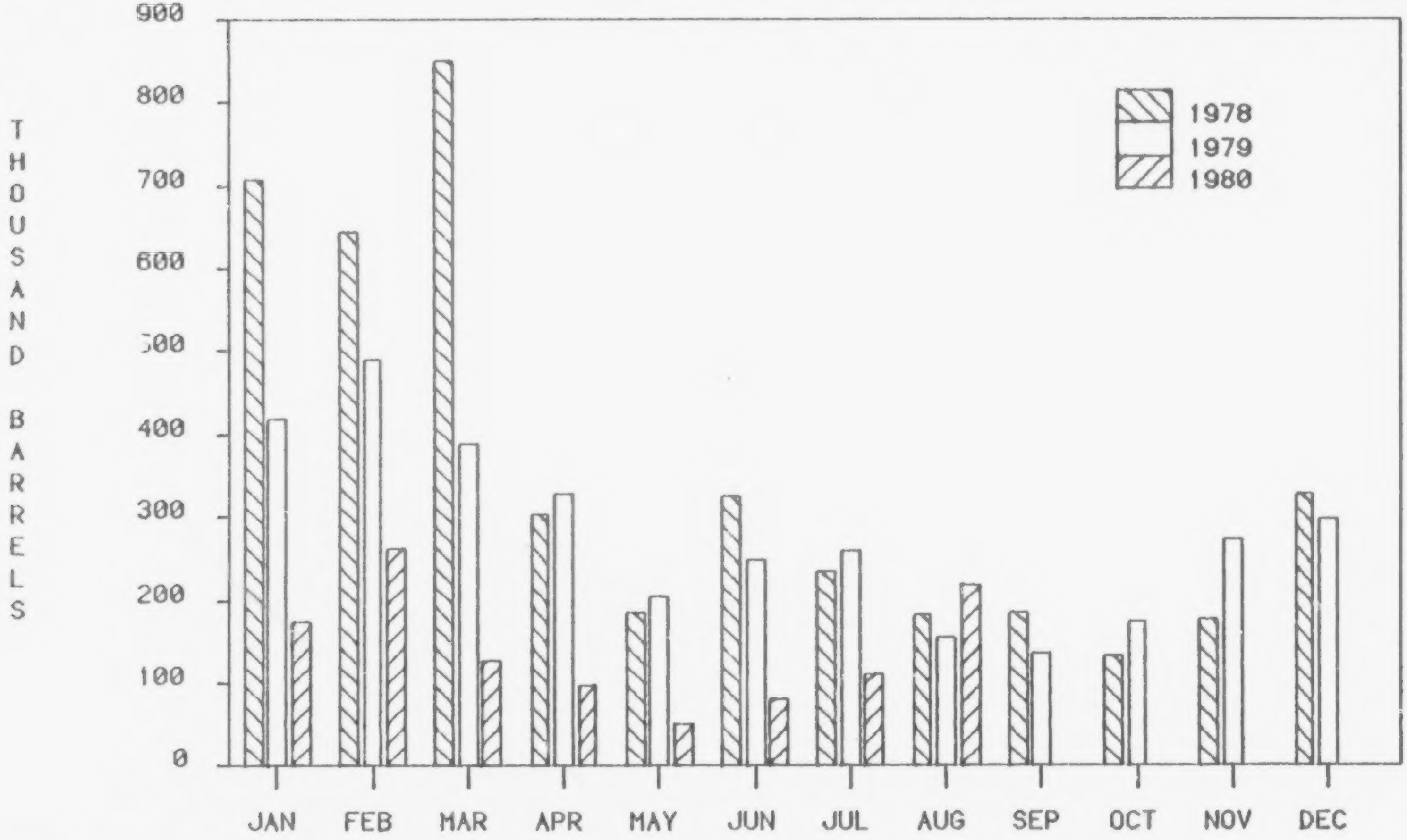
Table 3. Major Oil Suppliers to Electric Utilities (Ohio Portion)
(Thousand Barrels)

Month	Allied	Marathon	McCarty	Standard	Union	Other	Total
January	607.4	7.3	13.3	67.6	3.1	62.1	706.8
February	543.5	7.2	2.3	27.9	5.2	57.7	643.8
March	588.1	11.4	86.4	47.0	10.1	108.2	851.2
April	214.0	---	1.9	21.5	6.0	60.0	303.4
May	150.7	2.2	0.2	22.5	7.3	1.3	184.2
June	281.1	1.0	---	17.6	9.0	16.1	324.8
July	209.3	1.5	3.5	14.8	4.4	1.6	235.1
August	161.9	1.5	---	12.5	4.8	1.9	182.6
September	153.3	1.6	0.2	20.0	7.0	3.6	185.7
October	105.4	1.2	---	16.1	4.9	4.9	132.5
November	144.0	.7	---	11.8	7.6	12.5	176.6
December	305.5	3.3	---	10.2	8.1	2.1	329.2
Total	3,464.2	38.9	107.8	289.5	77.5	332.0	4,309.9
% of Total	80.4	0.9	2.5	6.7	1.8	7.7	
1979							
January	342.3	4.1	0.6	27.1	14.5	29.1	417.7
February	357.6	3.2	12.5	41.2	19.5	57.2	491.2
March	346.1	1.5	4.6	23.3	12.3	1.6	389.4
April	289.9	0.8	---	13.1	2.7	20.6	327.1
May	172.5	1.5	---	18.0	1.6	12.8	206.4
June	206.8	0.4	---	22.5	2.8	16.5	249.0
July	236.8	0.2	---	16.6	4.4	0.5	258.5
August	120.6	0.4	---	31.8	2.6	---	155.4
September	102.7	0.4	---	29.4	2.4	---	134.9
October	126.3	9.4	---	30.3	6.1	2.7	174.8
November	216.9	1.3	---	34.4	1.9	17.3	271.8
December	242.1	0.5	---	46.4	4.8	2.8	296.6
Total	2,760.6	23.7	17.7	334.1	75.6	161.1	3,372.8
% of Total	81.8	0.7	0.5	9.9	2.2	4.8	
1980							
January	105.0	0.2	---	49.9	4.2	14.9	174.2
February	214.0	0.2	---	44.4	4.2	---	262.8
March	73.9	0.4	---	49.9	3.3	.1	127.6
April	77.4	0.2	---	14.0	4.7	.7	97.0
May	40.0	0.2	---	5.1	4.5	1.1	50.9
June	40.5	---	---	35.1	4.7	1.0	81.3
July	71.8	---	---	34.4	4.4	1.2	111.8
August	111.2	42.9	---	45.4	3.5	15.5	218.5

Source: Ohio electric utilities' FPC Form 423 and the Ohio Department of Energy.

FIGURE 3. MONTHLY OIL DELIVERIES TO POWER PLANTS IN OHIO
(JANUARY 1978 - AUGUST 1980)



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CCD group, will be on-line in 1982. Consequently, a boost in nuclear power generation in Ohio is expected at that time.

Table 4 and Figure 4 show the combined monthly totals of the reporting utilities' net generation from Ohio plants. Historical power plant fuel consumption is displayed in Table 5.

Historical Patterns of Ohio Electric Consumption

In the past decade, electricity consumption has developed a different pattern from that of the 1960's, or the 1950's. The main difference is that the growth of electricity consumption no longer follows a straight line model. Beginning with the 1973 OPEC oil embargo, a series of economic and conservation measures have acted upon all sectors of society. The result has been reduced growth rates in the demand for electricity. This is particularly obvious in the residential and commercial sectors. For the last twelve months ending with September, total Ohio electricity consumption compared to the same period a year ago was down 2.4 percent (see Table 6 and Figure 5). The reduction was attributed mainly to the continuing difficulties faced by automobile-related industries throughout the state.

Electricity consumption by the residential and commercial sectors exhibits strong seasonal patterns, while the industrial sector fluctuates widely with general economic conditions. Last July, for example, industrial electricity consumption dipped to the lowest point in recent years, reflecting a severe downturn in the manufacturing industry. The August, September and October data, however, show signs of slight industrial recovery.

Twelve-Month Electric Energy Demand Forecast

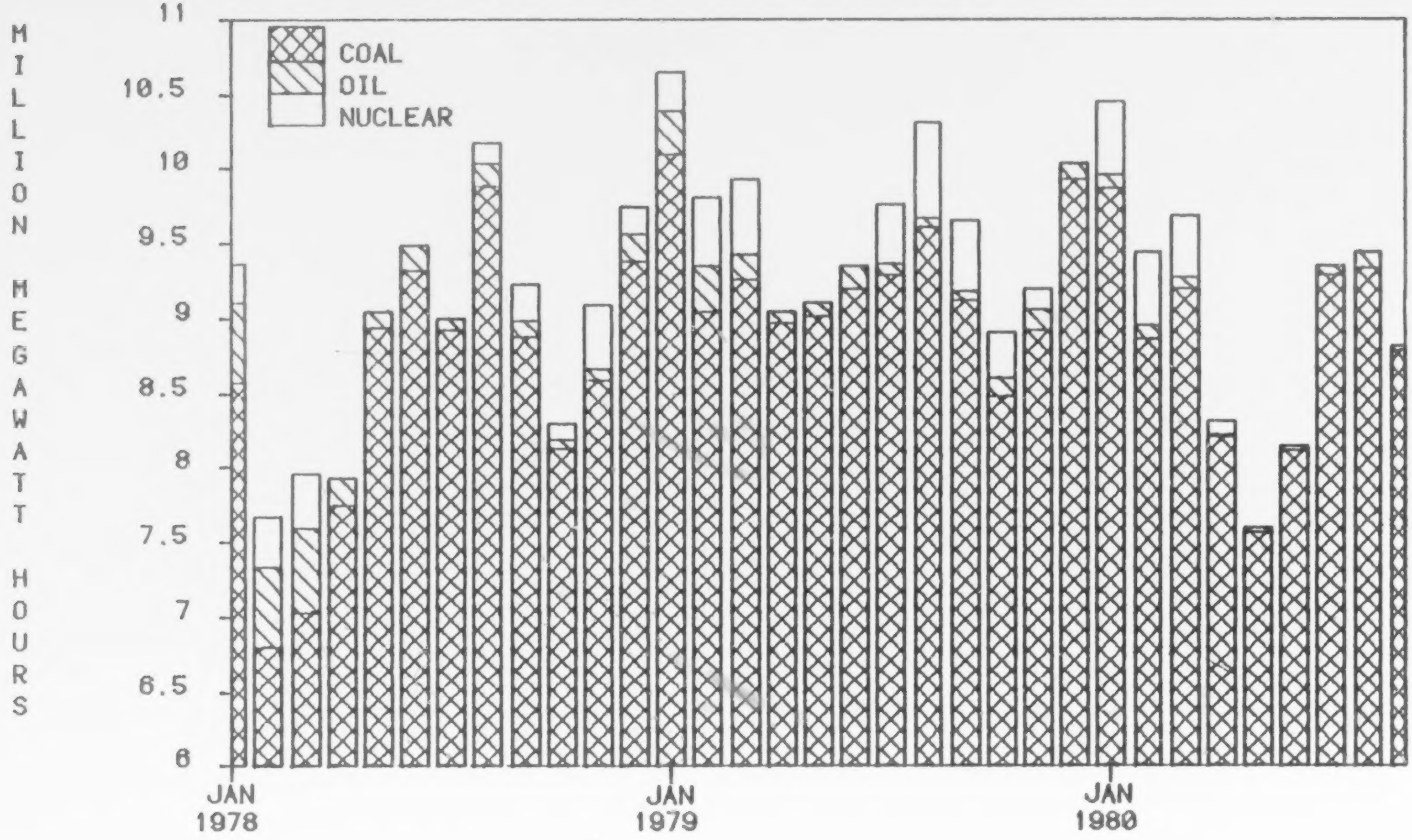
The electric demand forecast is prepared in two ways: 1) a utility by utility forecast is given, each forecast containing total projected demand for

Table 4. Major Ohio Utilities - Net Generation by Type of Fuel (Ohio Portion) (Thousand MWH)

	Coal		Oil		Gas	Nuclear		Total
1978								
Jan.	8,565	(91%)	545	(6%)	4	262	(3%)	9,376
Feb.	6,807	(89%)	528	(7%)	2	331	(4%)	7,668
Mar.	7,034	(88%)	565	(7%)	4	369	(5%)	7,972
Apr.	7,746	(98%)	184	(2%)	7	0		7,937
May	8,933	(99%)	108	(1%)	6	0		9,047
June	9,323	(98%)	171	(2%)	8	0		9,502
July	8,928	(99%)	75	(1%)	18	0		9,021
Aug.	9,889	(97%)	149	(2%)	9	137	(1%)	10,184
Sept.	8,874	(96%)	115	(1%)	10	235	(3%)	9,234
Oct.	8,124	(98%)	69	(1%)	8	104	(1%)	8,305
Nov.	8,582	(94%)	75	(1%)	7	429	(5%)	9,093
Dec.	9,387	(96%)	171	(2%)	6	184	(2%)	9,747
Total	102,192	(95.4%)	2,755	(2.6%)	89	2,051	(2%)	107,087
1979								
Jan.	10,092	(95%)	296	(3%)	9	260	(2%)	10,656
Feb.	9,042	(92%)	315	(3%)	10	458	(5%)	9,825
Mar.	9,263	(93%)	167	(2%)	6	505	(5%)	9,940
Apr.	8,965	(99%)	87	(1%)	5	0		9,057
May	9,016	(99%)	94	(1%)	8	0		9,118
Jun.	9,205	(98%)	140	(2%)	7	0		9,352
Jul.	9,291	(95%)	78	(1%)	8	389	(4%)	9,766
Aug.	9,613	(93%)	57	(1%)	3	642	(6%)	10,316
Sep.	9,127	(94%)	59	(1%)	6	478	(5%)	9,669
Oct.	8,481	(95%)	119	(1%)	11	304	(3%)	8,915
Nov.	8,922	(97%)	141	(2%)	20	128	(1%)	9,210
Dec.	9,937	(99%)	93	(1%)	11	0		10,040
Total	115,864	(96%)	1,646	(1%)	104	3,164	(3%)	115,868
1980								
Jan.	9,863	(94%)	92	(1%)	14	501	(5%)	10,472
Feb.	8,865	(94%)	94	(1%)	13	480	(5%)	9,453
Mar.	9,192	(95%)	81	(1%)	14	419	(4%)	9,706
Apr.	8,204	(99%)	11	(0%)	5	99	(1%)	8,320
May	7,565	(100%)	27	(0%)	8	0		7,600
Jun.	8,112	(100%)	27	(0%)	10	0		8,149
Jul.	9,289	(99%)	67	(1%)	10	0		9,366
Aug.	9,342	(99%)	101	(1%)	41	0		9,484
Sep.	8,781	(100%)	36	(0%)	3	0		8,820

Source: FPC Form 4 of major Ohio electric utilities; and the Ohio Department of Energy.

FIGURE 4. MAJOR OHIO ELECTRIC UTILITIES MONTHLY NET GENERATION BY TYPE OF FUEL (OHIO PORTION)



PREPARED BY THE OHIO DEPARTMENT OF ENERGY

Table 5. Major Ohio Electric Utilities
Fuel Consumption and Stocks
(Ohio Portion)

Month	Coal (Thousand Tons)		Oil (Thousand 42-Gal. Bbls)		Gas Burned
	Burned	In Stock	Burned	In Stock	(MMCF)
1978					
January	4,221.8	8,067.5	1,405.9	782.8	122
Febuary	3,336.5	5,817.2	1,373.5	1,212.4	116
March	3,394.6	4,876.0	1,380.5	1,316.9	234
April	3,702.5	5,796.2	359.0	1,264.1	170
May	4,189.7	7,092.4	311.6	1,138.8	180
June	4,387.4	7,833.6	460.0	1,128.0	211
July	4,259.2	8,152.3	230.5	1,946.7	225
August	4,755.9	7,476.5	259.0	1,088.4	233
September	4,244.3	7,513.1	324.3	1,101.1	237
October	3,761.1	8,536.6	191.1	1,179.4	214
November	3,924.0	9,514.4	228.7	1,027.0	96
December	4,403.2	9,551.8	447.3	1,240.6	157
TOTAL	48,580.2	---	6,971.5	---	2,195
Avg/Month	4,048.4	7,519.0	581.0	1,202.2	183
1979					
January	4,756.0	9,016.0	676.6	1,115.1	315
February	4,235.9	8,606.1	793.7	1,009.7	537
March	4,318.9	8,856.2	429.3	1,079.5	443
April	4,076.1	9,529.4	238.9	1,247.6	285
May	4,141.3	10,199.1	242.8	1,193.6	383
June	4,328.6	10,659.5	366.0	1,134.7	353
July	4,401.2	9,758.4	404.9	1,135.2	207
August	4,523.1	9,898.0	184.2	1,329.8	233
September	4,243.5	10,064.0	169.7	1,526.5	372
October	3,867.7	10,883.0	301.7	1,284.7	377
November	4,103.2	11,276.5	435.5	1,182.9	398
December	4,497.2	10,846.2	222.1	1,365.2	266
TOTAL	51,492.0	---	4,470.4	---	4,169
Avg/Month	4,291.0	9,966.0	372.5	1,217.0	347
1980					
January	4,460.0	10,083.0	247.0	1,347.0	317
February	3,935.0	11,351.0	258.0	1,309.0	316
March	4,098.0	11,189.0	182.0	1,247.0	354
April	3,639.0	11,806.0	95.0	1,360.0	129
May	3,397.0	12,898.0	104.0	1,289.0	132
June	3,665.3	13,631.9	108.5	1,282.5	261
July	4,249.1	12,928.8	206.7	1,253.3	301
August	4,336.7	13,114.2	297.6	1,399.9	799
September	3,928.2	13,309.7	123.9	1,097.7	99

Source: FPC Form 4 of major Ohio electric utilities and the Ohio Department of Energy.

Table 6. Ohio Electricity Consumption
October 1978 - September 1980
(Thousand MWH)

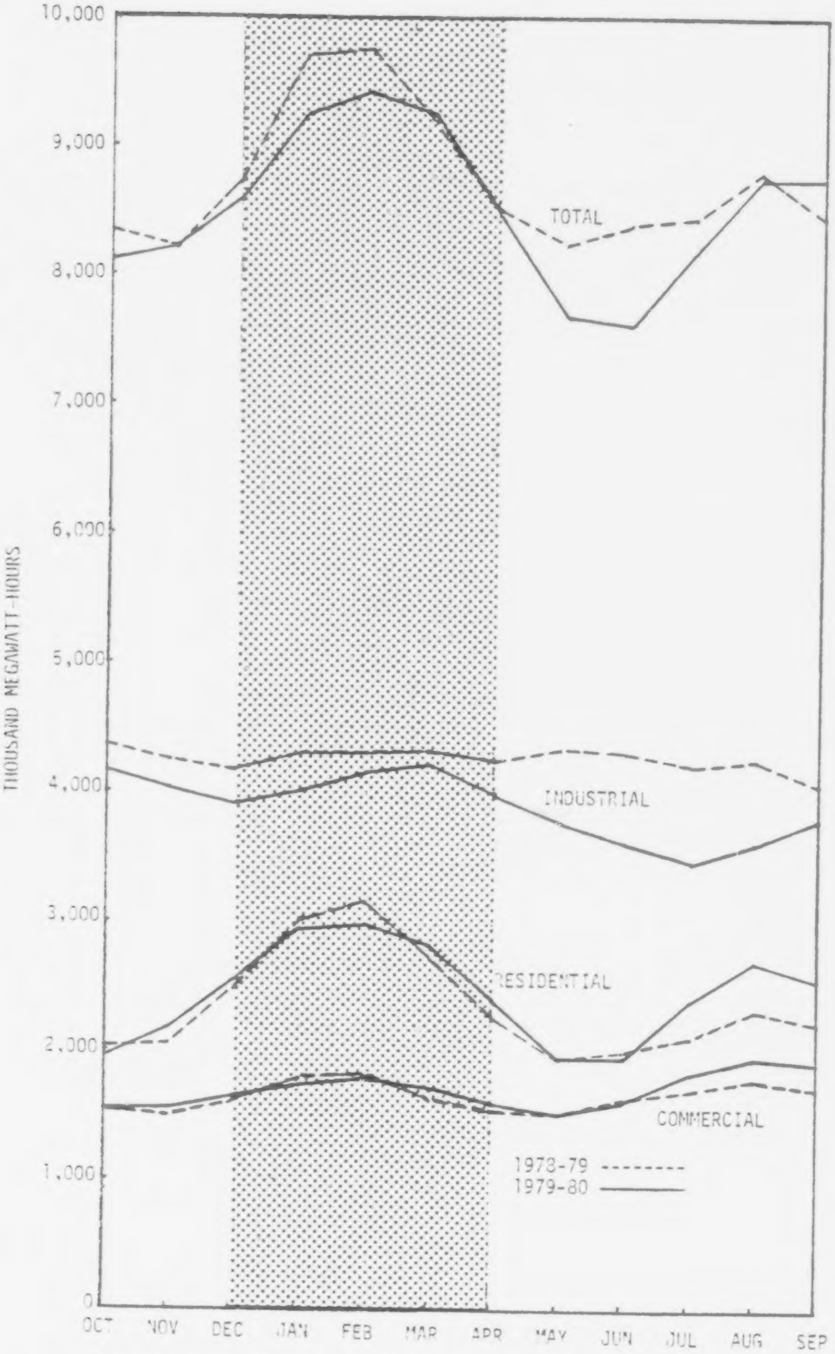
	October	November	December	January	February	March	April	May	June	July	August	September	Total
Residential													
1979-80	1,964.1	2,175.4	2,541.1	2,946.4	2,978.8	2,827.9	2,374.0	1,955.3	1,942.2	2,387.1	2,711.1	2,560.5	29,363.9
1978-79	2,021.5	2,039.9	2,485.5	3,090.0	3,144.9	2,707.6	2,260.4	1,951.2	1,999.6	2,097.5	2,315.2	2,217.1	28,330.4
% Change*	-2.8	6.6	2.2	-4.6	-5.2	4.4	5.0	0.2	-2.8	13.8	17.1	15.5	3.6
Commercial													
1979-80	1,547.2	1,550.2	1,642.2	1,732.7	1,785.8	1,720.5	1,596.7	1,518.9	1,622.4	1,830.1	1,946.0	1,907.2	20,399.9
1978-79	1,540.0	1,491.6	1,606.7	1,778.9	1,823.9	1,651.7	1,541.8	1,518.9	1,640.6	1,697.7	1,777.7	1,712.3	19,781.8
% Change*	0.5	3.9	2.2	-2.5	-2.0	4.1	3.5	0.0	-1.1	7.8	9.5	11.4	3.1
Industrial													
1979-80	4,132.3	4,032.8	3,920.5	4,055.4	4,143.9	4,196.2	4,006.3	3,785.3	3,616.0	3,475.9	3,621.3	3,806.1	46,792.0
1978-79	4,337.7	4,221.8	4,164.9	4,311.2	4,287.3	4,324.4	4,249.8	4,340.7	4,305.0	4,194.1	4,261.0	4,070.8	51,068.7
% Change	-4.7	-4.5	-5.9	-5.9	-3.3	-2.9	-5.7	-12.8	-16.0	-17.1	-15.0	-6.5	-8.4
Other													
1979-80	461.0	458.7	478.4	509.7	511.4	500.6	462.4	445.3	443.8	477.8	487.0	483.7	5,719.8
1978-79	454.6	447.9	486.5	526.4	509.4	492.6	451.5	445.0	444.3	444.7	459.6	444.4	5,606.9
% Change	1.4	2.4	-1.7	-3.1	0.3	1.6	2.4	-0.6	-0.1	7.4	6.0	8.8	2.0
Total													
1979-80	8,104.6	8,217.1	8,582.2	9,244.2	9,419.9	9,245.0	8,439.5	7,704.9	7,624.6	8,170.8	8,765.4	8,757.3	102,275.5
1978-79	8,353.7	8,201.1	8,743.7	9,706.6	9,765.5	9,176.4	8,503.4	8,255.9	8,389.4	8,434.0	8,813.5	8,444.7	104,787.9
% Change	-3.0	0.2	-1.8	-4.7	-3.5	0.7	-0.7	-6.6	-9.1	-3.1	-0.5	3.7	-2.4
Customers (000)													
Residential	3,402.2	3,409.4	3,416.6	3,423.3	3,428.9	3,431.4	3,430.1	3,430.4	3,428.6	3,426.5	3,427.6	3,429.6	
Commercial	347.7	348.3	348.8	349.3	349.7	349.8	350.8	351.0	350.2	350.8	350.6	350.8	
Industrial	22.2	22.3	22.4	22.5	22.5	22.5	22.5	22.6	22.7	22.8	22.9	22.9	
Total	3,772.1	3,780.0	3,787.8	3,795.1	3,801.1	3,803.7	3,803.4	3,804.0	3,801.5	3,800.2	3,801.6	3,803.2	

*Percentage changes is for the same period of the previous year (1978-1979).

Notes: (1) Excludes sales to other utilities.
(2) Figures may not add due to independent rounding.
(3) Figures reported include CG&E, CEI, C&SOE, DP&L, MP, OE, OP and TE.

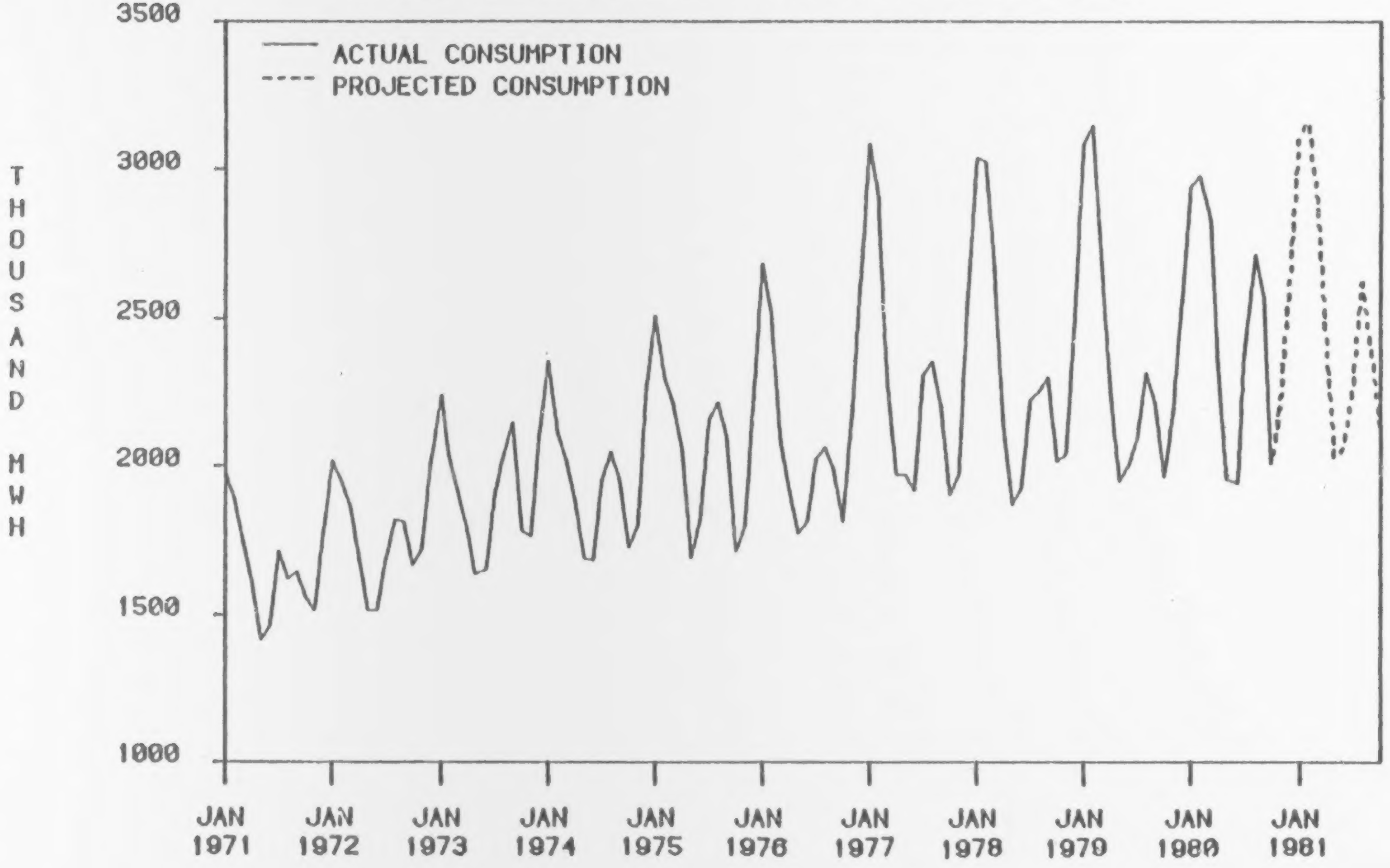
Source: Ohio Electric Utility Institute's Monthly Summaries and ODOE Form SE-1.

Figure 5. Comparison of Ohio Electricity Consumption by Sector
October 1978 - September 1980



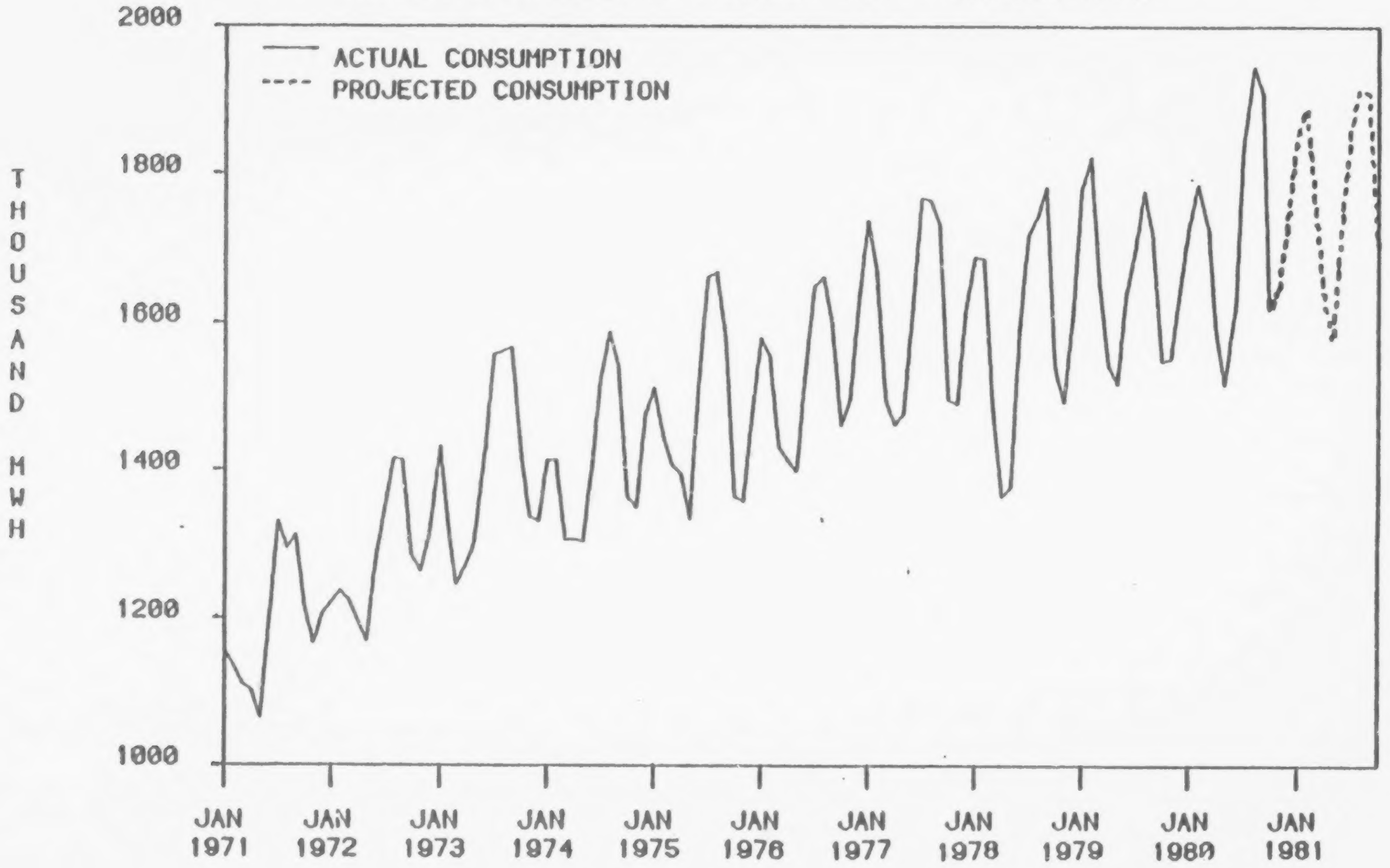
Source. Ohio Electric Utility Institute's Monthly Summaries.

FIGURE 6. MONTHLY OHIO RESIDENTIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1971 - OCTOBER 1981)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE AND THE OHIO DEPARTMENT OF ENERGY
(EXCLUDING OVEC)

FIGURE 7. MONTHLY OHIO COMMERCIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1971 - OCTOBER 1981)

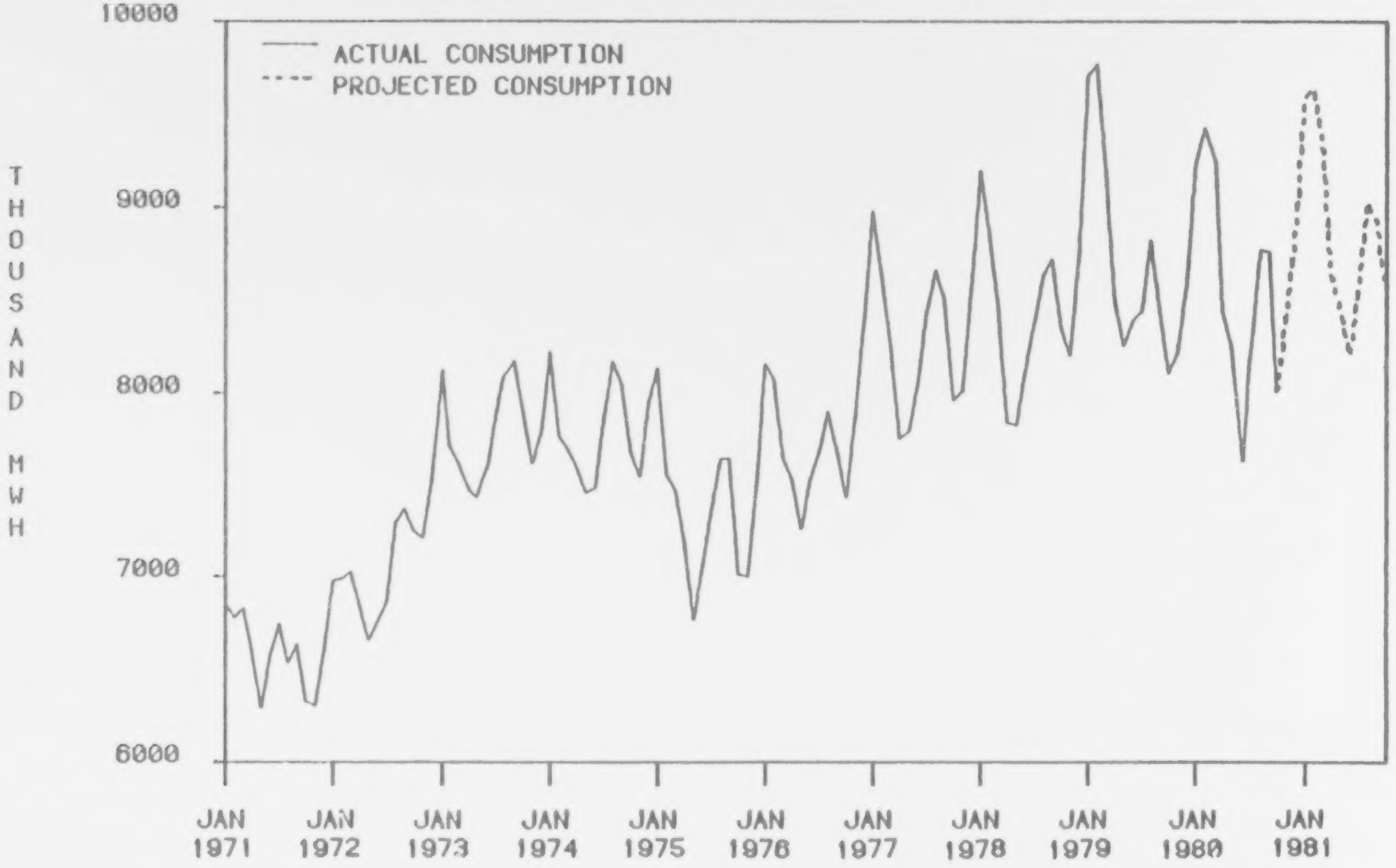


SOURCE: OHIO ELECTRIC UTILITY INSTITUTE AND THE OHIO DEPARTMENT OF ENERGY (EXCLUDING OVEC)

FIGURE 8. MONTHLY OHIO INDUSTRIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1971 - OCTOBER 1981)

SOURCE: OHIO ELECTRIC UTILITY INSTITUTE AND THE OHIO DEPARTMENT OF ENERGY (EXCLUDING OVEC)

FIGURE 9. TOTAL MONTHLY ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1971 - OCTOBER 1981)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE AND THE OHIO DEPARTMENT OF ENERGY
(EXCLUDING OVEC)

the utility's service area, which may or may not be located entirely within Ohio; and 2) an aggregate demand for electricity within the state of Ohio is forecast by sector (residential, commercial and industrial).

Electric Demand Forecast by Utility Service Area

For each utility service area, two electric demand forecasts are provided. One of the forecasts is a reporting utility forecast and the other is provided by the Ohio Department of Energy (Appendix A, Tables A-1 through A-9).

The Ohio Department of Energy forecasts are based on monthly data from the utility reports between January 1970 and September 1980. No independent forecast is given for OVEC because this utility has only one customer whose demand is preplanned.

Because of the overlapping months for the forecasts prepared on July 1 and November 1, the utilities may elect to use their last forecasts for those overlapping months in the new forecasting period. However, in this reporting period over half of the utilities have revised their forecasts from higher demand expectations to lower demand expectations, because of lower consumption experienced by those utilities recently.

Still, the utility forecasts generally are higher than those given by the ODOE. The Columbus and Southern Ohio Electric Company which serves the central Ohio area, forecasts the highest growth rate among all of the utilities. The ODOE forecasts are similar to those contained in the last report; growth rates will most likely decrease in the north and northeast areas of Ohio, where ODOE forecasts fall below actual demand. In the central and southeast areas, ODOE forecasts anticipate a slight gain over actual demand. The lower forecast by ODOE reflects slower recoveries from the current recession and continued conservation by Ohioans.

Electric Demand Forecast by Sector

Except for OVEC, Ohio's demand for electricity from all eight major reporting utilities may be estimated based on monthly consumption data from January 1971 through September 1980 (Table 6 and Figures 6 through 9). For each sector, this period provides a time series of 117 observations. Based on these observations, a forecasting model is constructed to generate a monthly forecast for the future months through October 1981. These sectoral forecasts are included in Appendix A, Tables A-10 through A-13.

The total Ohio electric demand forecast projects an increase of approximately 4 percent annually. This increase can only be interpreted as recovery in nature because the forecasts are compared to a year of lower than normal consumption. The residential and the commercial sectors are expected to have an annual growth rate of 2.3 percent and 3.8 percent respectively. The forecast for the industrial sector shows a decline of 3.3 percent from a year ago. Thus, the forecast suggests that higher growth rates are centered in the residential and the commercial sectors.

Assessment of Fuel Adequacy by Utility/Utility Group

Average daily requirements were determined by dividing projected monthly coal consumption by the number of days in the month. End-of-month stocks were derived by considering consecutively end of October 1980 stocks, projected monthly coal delivery schedules as submitted by the utilities, and projected monthly coal consumption levels. Number of days' supply of coal was estimated on the basis of average daily requirements in subsequent months and the level of end-of-month stocks for the month in question.

Coal consumption projections were made through the use of a formula which adjusts coal consumption levels for changes in the consumption of oil,

natural gas, and nuclear fuel in a manner that is consistent with the projected demand, or net energy for load. In making these projections it is assumed that the following conditions will be satisfied:

1. Monthly demand (net energy for load) for November 1980 through October 1981 will be realized in the manner projected by the utility companies.
2. Energy required to supply projected net energy for load in a given month of November 1980 through October 1981 will be proportional to the energy consumed in supplying the actual net energy for load in the respective months of November 1978 through October 1980.
3. Monthly delivery schedules for all fuels in 1980 through 1981 will be met in the manner projected by the utility companies.
4. Nuclear generating units will function properly with a load factor of 60 percent.

In the case of the CAPCO and CCD groups, where individual members have interconnected transmission systems and operate jointly-owned generation units, the figures presented in this report for the total groups are more significant than those reported for the individual members. As displayed in Table 7, the number of days' supply of coal through the end of March 1981 for the AEP, APS, CCD, and CAPCO utility groups ranges from 72 days to 122 days. A 90-day supply of coal should be sufficient in the event of a supply disruption.

The assessment of oil adequacy is derived by using utilities' projected monthly consumption and deliveries. The projected deliveries are low compared to the consumption levels experienced in the 1970's. Oil deliveries are believed sufficient, however, since the utilities have demonstrated their ability to reduce fuel oil consumption in the first nine months of 1980. The actual consumption of oil in this period accounts for only 46 percent of the same period in 1979.

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model
(November 1980 - October 1981)

CAPCO GROUP (EXCLUDING DUQUESNE LIGHT COMPANY)

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	4185.0	4428.0	4690.9	4194.5	4453.5	4198.1	4144.2	4354.4	4519.7	4582.8	4239.6	4368.0	52358.6
EST DEMAND GEN BY COAL	2984.2	2867.7	3078.7	2472.5	3290.3	3636.5	3573.1	3555.2	3525.8	3811.6	3197.2	3119.7	39112.5
EST DEMAND GEN BY OIL	64.0	53.6	57.2	67.7	34.4	16.3	7.9	12.5	11.4	21.2	27.0	75.6	448.9
PROJ DAILY CONSUMPTION													
COAL (KTONS)	41.72	38.80	41.65	35.76	44.52	50.84	48.34	49.70	47.70	51.57	44.70	42.21	
OIL (KBBL)	4.60	3.73	3.98	5.04	2.39	1.17	0.55	0.90	0.80	1.48	1.94	5.26	
COAL DELIVERIES (KTONS)	1326.1	1376.4	1462.8	1334.5	1381.8	1030.0	1250.6	1317.8	1346.8	1445.9	1403.8	1536.1	16212.7
OIL DELIVERIES (KBBL)	125.32	122.24	117.84	120.17	89.93	34.07	19.27	28.01	23.80	44.41	79.73	137.76	942.56
END OF MONTH STOCK													
COAL (KTONS)	3870.8	3966.3	4055.8	4287.5	4205.6	3612.7	3270.9	3002.8	2777.8	2524.4	2506.9	2655.0	
OIL (KBBL)	574.2	578.5	571.7	543.5	557.7	556.7	558.8	559.9	558.9	557.7	579.5	552.6	
NUMBER OF DAYS SUPPLY													
COAL	99.	96.	92.	90.	85.	74.	67.	61.	57.	58.	60.	66.	
OIL	251.	279.	270.	266.	257.	236.	210.	188.	163.	143.	131.	133.	

CLEVELAND ELECTRIC ILLUMINATING COMPANY

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	1578.0	1654.0	1709.0	1507.0	1623.0	1519.0	1584.0	1642.0	1708.0	1716.0	1584.0	1636.0	19460.0
EST DEMAND GEN BY COAL	972.0	952.5	951.0	727.4	1053.1	1101.2	1146.3	1139.4	1171.2	1259.5	1116.3	927.3	12517.2
EST DEMAND GEN BY OIL	29.2	43.3	34.0	47.9	29.5	5.2	4.0	3.9	6.1	5.1	6.7	43.4	258.4
PROJ DAILY CONSUMPTION													
COAL (KTONS)	13.94	13.22	13.20	10.79	14.62	15.79	15.91	16.34	16.26	17.48	16.01	12.87	
OIL (KBBL)	2.16	3.10	2.43	3.66	2.11	0.38	0.28	0.29	0.44	0.37	0.49	3.10	
COAL DELIVERIES (KTONS)	416.7	445.1	440.2	378.3	433.6	259.6	333.5	417.2	460.5	463.1	483.2	474.7	5005.7
OIL DELIVERIES (KBBL)	58.76	87.36	68.60	96.64	59.52	10.31	7.93	7.93	12.29	10.31	13.50	87.17	520.32
END OF MONTH STOCK													
COAL (KTONS)	1028.7	1063.9	1094.8	1160.2	1140.6	926.4	766.6	693.5	650.0	571.2	574.0	649.7	
OIL (KBBL)	416.5	407.8	400.9	391.3	385.3	384.2	383.3	382.5	381.2	380.0	378.8	369.8	
NUMBER OF DAYS SUPPLY													
COAL	81.	83.	81.	76.	72.	58.	47.	42.	38.	37.	44.	48.	
OIL	306.	304.	304.	306.	299.	274.	246.	218.	190.	162.	136.	134.	

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (Cont'd)
(November 1980 - October 1981)

OHIO EDISON SYSTEM

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	1923.1	2033.0	2240.7	1982.9	2128.0	2016.0	1902.2	2037.5	2114.2	2145.6	1967.5	2041.8	24532.5
EST DEMAND GEN BY COAL	1702.3	1651.9	1778.5	1443.9	1818.4	2123.8	2020.7	2035.5	1981.8	2148.2	1707.5	1760.2	22172.7
EST DEMAND GEN BY OIL	31.9	4.7	22.9	10.3	4.5	10.7	3.4	8.1	4.9	15.7	17.9	23.1	158.0
PROJ DAILY CONSUMPTION													
COAL (KTONS)	26.29	24.69	26.58	23.07	27.18	32.80	30.20	31.44	29.62	32.11	26.37	26.31	
OIL (KBBL)	2.26	0.32	1.56	0.75	0.31	0.75	0.23	0.58	0.33	1.07	1.26	1.58	
COAL DELIVERIES (KTONS)	759.4	771.3	837.6	771.2	763.2	770.4	737.1	720.6	746.3	802.8	740.6	881.4	9302.0
OIL DELIVERIES (KBBL)	66.31	9.74	47.58	21.38	9.10	22.33	7.06	16.75	10.08	32.67	37.30	47.85	328.15
END OF MONTH STOCK													
COAL (KTONS)	2390.9	2396.9	2410.5	2512.8	2433.5	2220.0	2020.9	1798.5	1626.6	1434.1	1383.6	1449.5	
OIL (KBBL)	115.8	115.7	114.8	114.3	114.0	113.6	113.4	112.9	112.7	112.2	111.5	110.5	
NUMBER OF DAYS SUPPLY													
COAL	96.	93.	87.	84.	77.	73.	66.	58.	55.	54.	53.	57.	
OIL	167.	162.	206.	195.	171.	158.	131.	112.	87.	72.	59.	82.	

TOLEDO EDISON

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	683.9	741.0	741.2	704.6	702.5	663.1	658.0	674.9	697.5	721.2	688.1	690.2	8366.2
EST DEMAND GEN BY COAL	309.9	263.2	349.1	301.2	418.9	411.5	406.1	380.2	372.7	403.9	373.5	432.3	4422.6
EST DEMAND GEN BY OIL	2.9	5.6	0.4	9.5	0.4	0.5	0.5	0.4	0.4	0.4	2.5	9.2	32.6
PROJ DAILY CONSUMPTION													
COAL (KTONS)	4.15	3.41	4.52	4.17	5.42	5.50	5.26	5.09	4.82	5.23	5.00	5.60	
OIL (KBBL)	0.20	0.38	0.03	0.70	0.02	0.03	0.04	0.03	0.03	0.03	0.18	0.63	
COAL DELIVERIES (KTONS)	150.0	160.0	185.0	185.0	185.0	0.0	180.0	180.0	140.0	180.0	180.0	180.0	1905.0
OIL DELIVERIES (KBBL)	0.26	25.14	1.67	2.14	21.31	1.43	4.29	3.33	1.43	1.43	28.93	2.74	94.09
END OF MONTH STOCK													
COAL (KTONS)	451.2	505.5	550.4	614.5	631.5	466.3	483.4	510.8	501.2	519.1	549.2	555.8	
OIL (KBBL)	41.8	55.1	56.0	37.9	58.4	58.9	62.0	64.5	65.0	65.5	89.2	72.4	
NUMBER OF DAYS SUPPLY													
COAL	107.	105.	108.	115.	122.	92.	96.	101.	96.	112.	124.	133.	
OIL	294.	323.	300.	279.	320.	292.	268.	242.	223.	241.	398.	381.	

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (Cont'd)
(November 1980 - October 1981)

CCD GROUP

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	2911.3	3287.0	3586.4	3122.7	3009.8	2724.2	2859.4	3031.8	3379.1	3337.6	2905.1	2899.5	37053.8
EST DEMAND GEN BY COAL	2978.3	3336.0	3535.9	3032.1	3100.8	2786.6	2863.2	3186.8	3577.5	3331.2	2894.3	2922.4	37544.8
EST DEMAND GEN BY OIL	48.5	49.3	37.4	42.1	37.7	23.0	19.7	15.6	27.7	23.8	20.1	30.3	375.2
PROJ DAILY CONSUMPTION													
COAL (KTONS)	46.25	50.13	53.14	48.71	46.60	43.27	43.03	49.49	53.76	50.06	44.94	43.92	
OIL (KBBL)	7.35	7.22	5.48	6.60	5.53	3.48	2.89	2.37	4.06	3.48	3.04	4.44	
COAL DELIVERIES (KTONS)	1595.1	1726.7	1706.6	1541.6	1454.7	766.4	795.4	928.4	1065.4	1438.4	1484.1	1366.6	15869.4
OIL DELIVERIES (KBBL)	112.47	105.27	78.55	84.76	73.67	32.52	271.81	43.79	94.90	68.00	49.17	56.74	1071.65
END OF MONTH STOCK													
COAL (KTONS)	4774.2	4951.3	5013.5	5146.7	5157.7	4628.6	4097.3	3545.1	2948.9	2840.6	2978.7	2986.4	
OIL (KBBL)	644.2	611.0	581.5	554.6	540.7	518.2	737.7	735.9	747.5	741.5	739.4	715.7	
NUMBER OF DAYS SUPPLY													
COAL	94.	101.	110.	114.	110.	95.	80.	69.	62.	64.	66.	62.	
OIL	102.	114.	132.	151.	167.	160.	181.	160.	148.	134.	121.	107.	

CINCINNATI GAS & ELECTRIC COMPANY

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	1179.5	1346.8	1487.0	1294.0	1247.1	1136.5	1205.7	1284.4	1454.9	1469.2	1225.2	1185.1	15515.5
EST DEMAND GEN BY COAL	1037.7	1075.7	1316.2	1118.8	1158.3	1077.9	1231.8	1228.9	1348.3	1319.6	1163.6	1112.5	14189.4
EST DEMAND GEN BY OIL	7.4	5.1	5.9	4.3	0.7	1.3	2.4	2.8	6.8	6.5	1.7	4.5	49.5
PROJ DAILY CONSUMPTION													
COAL (KTONS)	16.00	16.05	19.64	17.84	17.28	16.62	18.38	18.95	20.12	19.69	17.94	16.60	
OIL (KBBL)	1.31	0.87	1.01	0.78	0.13	0.22	0.41	0.50	1.17	1.10	0.30	0.77	
COAL DELIVERIES (KTONS)	630.0	630.0	630.0	600.0	602.7	300.0	300.0	450.0	500.0	550.0	550.0	526.2	6268.9
OIL DELIVERIES (KBBL)	40.00	20.00	20.00	20.00	20.00	0.0	20.00	20.00	20.00	40.00	20.00	20.00	260.00
END OF MONTH STOCK													
COAL (KTONS)	1401.8	1534.3	1555.5	1638.0	1705.0	1506.5	1236.8	1118.5	994.8	934.5	946.4	958.0	
OIL (KBBL)	237.7	230.6	219.2	216.6	232.6	226.0	233.2	238.3	222.1	227.9	238.8	235.0	
NUMBER OF DAYS SUPPLY													
COAL	79.	84.	90.	94.	94.	79.	63.	56.	52.	54.	58.	60.	
OIL	347.	332.	322.	315.	303.	273.	267.	315.	328.	335.	323.	325.	

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (Cont'd)
(November 1980 - October 1981)

DAYTON POWER & LIGHT COMPANY

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	888.9	995.2	1044.4	965.7	931.7	830.6	822.6	862.3	965.2	941.4	837.9	883.4	10969.3
EST DEMAND GEN BY COAL	1006.1	1330.3	1237.5	1115.5	1035.1	961.4	1027.1	1127.1	1301.0	1184.2	955.2	1010.9	13291.5
EST DEMAND GEN BY OIL	38.0	38.5	28.1	34.6	34.6	20.5	16.0	11.6	19.5	16.0	17.0	24.6	299.0
PROJ DAILY CONSUMPTION													
COAL (KTONS)	15.12	19.35	18.00	17.35	15.06	14.45	14.94	16.94	18.93	17.23	14.36	14.71	
OIL (KBBL)	2.53	2.48	1.81	2.38	2.23	1.37	1.03	0.77	1.26	1.03	1.13	1.58	
COAL DELIVERIES (KTONS)	534.0	643.0	592.0	540.0	454.0	155.0	184.0	192.0	279.0	602.0	622.0	529.0	5326.0
OIL DELIVERIES (KBBL)	50.00	49.00	38.00	45.00	39.00	25.00	244.00	16.00	67.00	20.00	21.00	29.00	643.00
END OF MONTH STOCK													
COAL (KTONS)	1964.3	2007.3	2041.2	2078.1	2065.3	1786.7	1507.5	1191.1	883.4	951.3	1142.4	1215.5	
OIL (KBBL)	246.0	218.1	200.0	176.0	146.0	130.0	342.0	334.9	363.0	351.0	338.1	318.0	
NUMBER OF DAYS SUPPLY													
COAL	111.	124.	131.	133.	126.	105.	85.	67.	55.	65.	73.	70.	
OIL	111.	109.	110.	131.	133.	127.	221.	200.	200.	178.	157.	139.	

COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	843.0	945.0	1055.0	863.0	831.0	757.0	831.0	885.0	959.0	927.0	842.0	831.0	10569.0
EST DEMAND GEN BY COAL	934.5	929.9	982.1	797.8	907.4	747.2	604.3	830.8	928.1	827.4	775.4	799.0	10063.9
EST DEMAND GEN BY OIL	3.0	5.7	3.4	3.3	2.4	1.2	1.2	1.2	1.3	1.3	1.3	1.2	26.7
PROJ DAILY CONSUMPTION													
COAL (KTONS)	15.14	14.59	15.40	13.38	14.23	12.11	9.48	13.46	14.56	12.98	12.57	12.53	
OIL (KBBL)	0.62	1.11	0.66	0.69	0.47	0.25	0.24	0.25	0.26	0.25	0.27	0.24	
COAL DELIVERIES (KTONS)	431.1	453.7	484.6	401.6	398.0	311.4	311.4	286.4	286.4	286.4	312.1	311.4	4274.5
OIL DELIVERIES (KBBL)	22.47	36.27	20.55	19.76	14.67	7.52	7.81	7.79	7.90	8.00	8.17	7.74	168.65
END OF MONTH STOCK													
COAL (KTONS)	1408.2	1409.7	1416.8	1430.5	1387.3	1335.4	1353.0	1235.5	1070.7	954.8	889.9	812.8	
OIL (KBBL)	160.5	162.3	162.3	162.1	162.1	162.2	162.4	162.7	162.4	162.5	162.5	162.6	
NUMBER OF DAYS SUPPLY													
COAL	97.	100.	114.	117.	113.	106.	100.	92.	84.	74.	64.	55.	
OIL	363.	366.	366.	365.	365.	365.	366.	366.	365.	366.	366.	366.	

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (Cont'd)
(November 1980 - October 1981)

AMERICAN ELECTRIC POWER SYSTEM (EXCLUDING CSOE)

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	6317.0	7136.0	7930.0	7122.0	7060.0	6303.0	6228.0	6079.0	6329.0	6647.0	6269.0	6431.0	79850.9
EST DEMAND GEN BY COAL	7207.7	8684.5	9571.5	8475.2	7893.1	7097.2	6875.7	7677.8	7772.0	7956.5	7309.7	5980.8	92501.4
EST DEMAND GEN BY OIL	4.4	4.3	4.8	5.0	4.2	3.8	4.4	4.3	4.4	3.3	3.8	3.2	49.8
PROJ DAILY CONSUMPTION													
COAL (KTONS)	107.73	125.62	138.45	131.04	114.17	106.08	99.45	114.76	112.42	115.09	109.25	86.51	
OIL (KBBL)	2.57	2.40	2.67	2.99	2.38	2.19	2.45	2.47	2.49	1.87	2.18	1.81	
COAL DELIVERIES (KTONS)	3645.9	3861.3	3478.4	3432.4	3461.0	2978.6	3351.6	3462.6	2675.6	3538.6	3490.9	3649.6	41026.5
OIL DELIVERIES (KBBL)	72.69	77.08	82.95	85.19	78.57	67.89	72.68	72.99	72.49	56.78	67.44	57.60	864.36
END OF MONTH STOCK													
COAL (KTONS)	11658.6	11625.7	10812.3	10444.4	10366.1	10162.4	10430.9	10450.8	9641.4	9612.3	9825.6	10793.4	
OIL (KBBL)	488.1	490.7	490.8	489.2	494.1	496.1	493.0	491.9	487.3	486.2	488.2	489.8	
NUMBER OF DAYS SUPPLY													
COAL	88.	91.	93.	98.	97.	93.	91.	93.	93.	94.	92.	87.	
OIL	195.	195.	202.	214.	223.	219.	218.	215.	209.	200.	200.	194.	

ALLEGHENY POWER SYSTEM

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	2527.7	2828.4	3036.4	2819.4	2851.2	2584.0	2589.3	2513.7	2622.7	2724.7	2607.3	2717.0	32421.7
EST DEMAND GEN BY COAL	2772.9	3099.9	3154.8	2923.7	2988.1	2948.3	3236.6	3282.9	3084.3	2948.1	2925.4	2988.7	36353.7
EST DEMAND GEN BY OIL	0.0	0.0	0.0	0.0	0.0	5.2	4.7	0.0	2.6	20.7	14.1	11.1	58.4
PROJ DAILY CONSUMPTION													
COAL (KTONS)	37.99	41.10	41.83	41.44	39.62	40.39	42.91	44.98	40.89	39.09	40.08	39.62	
OIL (KBBL)	0.0	0.0	0.0	0.0	0.0	0.71	0.62	0.0	0.35	2.75	1.93	1.48	
COAL DELIVERIES (KTONS)	1294.0	1294.0	1186.9	1186.9	1186.9	1186.9	1186.9	1186.9	1186.9	1186.9	1186.9	1186.9	14456.8
OIL DELIVERIES (KBBL)	15.36	15.36	21.16	21.16	21.16	21.16	21.16	21.16	21.16	21.16	21.16	21.16	242.30
END OF MONTH STOCK													
COAL (KTONS)	4268.5	4288.4	4178.7	4163.9	4122.7	4097.8	3954.5	3792.1	3711.3	3686.5	3671.1	3629.6	
OIL (KBBL)	368.5	383.9	405.0	426.2	447.4	447.2	449.2	470.4	480.7	416.6	379.8	355.1	
NUMBER OF DAYS SUPPLY													
COAL	104.	105.	103.	101.	97.	96.	95.	95.	94.	94.	93.	90.	
OIL	638.	614.	594.	575.	557.	542.	684.	685.	732.	709.	686.	663.	

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (Cont'd)
(November 1980 - October 1981)

OHIO VALLEY ELECTRIC CORPORATION

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	1345.8	1370.4	1357.4	1218.6	1378.1	1340.9	1359.7	1276.6	1418.9	1363.0	1306.9	1407.1	16143.5
EST DEMAND GEN BY COAL	1271.8	1310.1	1280.1	1182.1	1266.5	1315.5	1362.4	1235.7	1413.2	1481.6	1483.3	1345.2	15947.4
PROJ DAILY CONSUMPTION COAL (KTONS)	18.28	18.23	17.81	17.58	17.62	18.91	18.95	17.77	19.66	20.61	21.33	18.72	
COAL DELIVERIES (KTONS)	585.0	593.0	587.0	533.0	605.0	591.0	679.6	651.6	322.5	700.6	672.6	616.0	7137.0
END OF MONTH STOCK COAL (KTONS)	1710.3	1738.2	1773.1	1796.3	1855.1	1878.7	1970.8	2089.4	1802.4	1864.0	1896.9	1932.7	
NUMBER OF DAYS SUPPLY COAL	96.	98.	98.	97.	100.	99.	101.	103.	89.	96.	103.	107.	

NATURAL GAS

Service shares of the gas distribution companies operating in Ohio are presented in Table 8 for the annual period September 1979 to August 1980. During this period of time, the four large distribution companies - Cincinnati Gas and Electric, Columbia Gas of Ohio, Dayton Power and Light, and East Ohio Gas - jointly distributed 94.70 percent of the reported natural gas requirements of the state. The four intermediate companies - National Gas and Oil, Ohio Gas, River Gas, and West Ohio Gas - distributed an additional 4.38 percent. The remaining 0.82 percent of the reported natural gas requirements were distributed by 22 small utilities. The figures presented in Table 8 do not include distribution by municipal utilities or self-help natural gas.

Supply

The major supplier of natural gas for the state of Ohio are presented in Table 9, and shown graphically in Figure 10. Between September 1979 and August 1980, the eight major gas distribution companies of Ohio, which together account for 99.08 percent of the reported natural gas distribution in the state, procured 939,880 MMCF of natural gas to meet Ohio's requirements. This represents a 6.8 percent decrease in the supplies of natural gas to Ohio compared to the same period last year. This decline is not due to a reduction in the availability of natural gas supplies as such; but rather, this reflects an adjustment by Ohio's gas distribution companies to the declining demand for natural gas by residential, commercial and industrial end users in Ohio, caused by effective conservation measures and a milder winter of 1979-1980.

Table 8. Total Natural Gas Requirements of All Commercial Utilities in Ohio Between September 1979 and August 1980 (MMCF)

	(1) Sales to All End Users	(2) Storage (In)	Total Requirement (1+2)	Percent of Total Ohio Requirement
Cincinnati Gas and Electric Co.	87,241	0	87,241	9.20
Columbia Gas of Ohio	341,312	0	341,312	35.98
Dayton Power and Light Co.	62,308	53	62,361	6.57
East Ohio Gas Co.	344,227	63,207	407,434	42.95
National Gas and Oil Co.	14,740	981	15,721	1.66
Ohio Gas Co.	7,110	0	7,110	0.75
River Gas Co.	4,475	0	4,475	0.47
West Ohio Gas Co.	14,226	0	14,226	1.50
Total Eight Major Utilities	875,639	64,241	939,880	99.08
Total Small Utilities	8,765	----	8,765	0.92
Total All Utilities	884,404	64,241	948,645	100.00

Source: ODOE Form SG-2 and SG-4.

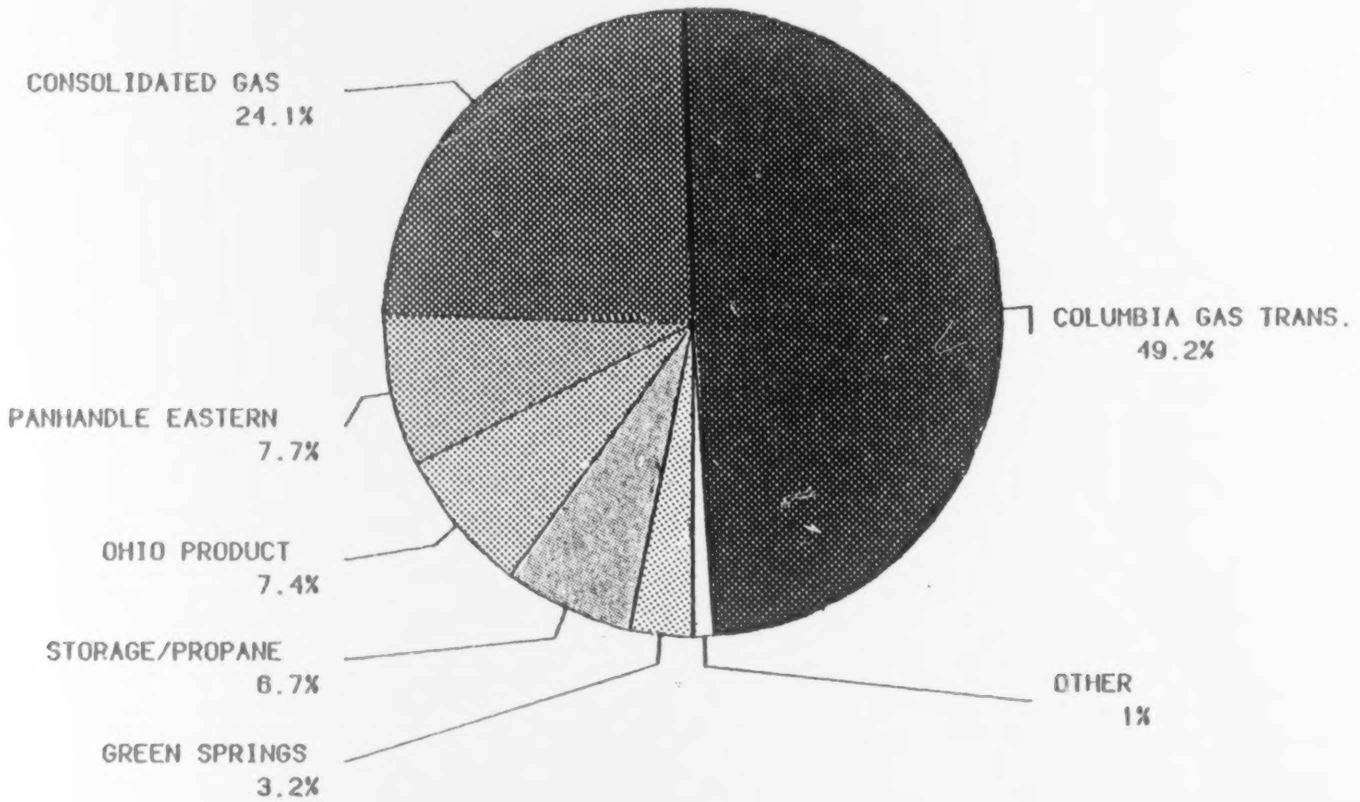
Table 9. Sources of Natural Gas Supplies to the Eight Major Gas Utilities Between September 1979 and August 1980 (MMCF)

Source	Supply	Percent of Total	Rank
Columbia Gas Transmission Corp.	462,979	49.26	1
Consolidated Gas Supply Corp.	227,139	24.17	2
Lawrenceburg Gas Transmission Corp.	2,238	0.24	8
Michigan/Wisconsin Pipe Line Co.	1,085	0.11	10
Panhandle Eastern Pipe Line Co.	72,807	7.75	3
Tennessee Gas Pipeline Co.	1,696	0.18	9
Texas Eastern Transmission Corp.	7,098	0.75	7
Texas Gas Transmission Corp.	261	0.03	11
Green Springs (SNG)	30,979	3.30	6
Storage/Propane*	63,639	6.77	5
Other	-745	-0.08	
Total SNG and Out-of-State	869,176	92.48	
Ohio Product	70,704	7.52	4
Total	939,880	100.00	

*Gas in storage represents a source of supply during the period under consideration.

Source: ODOE Form SG-2.

FIGURE 10. SOURCE OF NATURAL GAS SUPPLY TO THE EIGHT MAJOR OHIO GAS UTILITIES (SEPT. 1979 - AUG. 1980)



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Of the 939,880 MMCF of total procurement, 92.48 percent is interstate gas purchases and SNG. The remaining 7.52 percent is purchases of Ohio gas. The 70,704 MMCF of Ohio production of natural gas purchased by the eight major gas utilities between September 1979 and August 1980 represents a 3.9 percent increase over their purchases of Ohio product during the preceding annual period. This amount corresponds approximately to 57 percent of the state's total production in the calendar year 1979. The remainder of the natural gas produced in Ohio is either transported directly to end users in the self-help program, or is distributed by some of the 22 smaller utilities and the municipal gas utilities.

Domestic interstate gas is the major source of supply for Ohio. Columbia Gas Transmission Corporation and Consolidated Gas Supply Corporation have provided 73.43 percent of the natural gas supplied to the eight major Ohio gas distribution companies. It is estimated that the reported volume of LNG in the pipelines of these two major suppliers accounted for 3.2 percent of the natural gas procured by Ohio utilities during the September 1979 - August 1980 annual period.

Due to USDOE's disagreement with Algerian price demands, shipments of LNG to the United States have stopped effective April 1980. Although the resolution of differences with the Algerian authorities is expected soon, final agreement has not yet been reached. The impact of this situation on reported supplies of natural gas from Consolidated Gas Supply Corporation should be nil during the 1980-81 heating season, for Consolidated Gas has not included procurements of LNG among its projected sources of supply for the 1980-81 heating season. However, LNG accounts for approximately 2.2 percent of Columbia Gas Transmission Corporation's projected heating season

supplies for 1980-81. At the present time, additional supplies of interstate natural gas are expected to be available. This would make up for the reduction in LNG imports if LNG deliveries are not resumed by the end of the 1980-81 heating season.

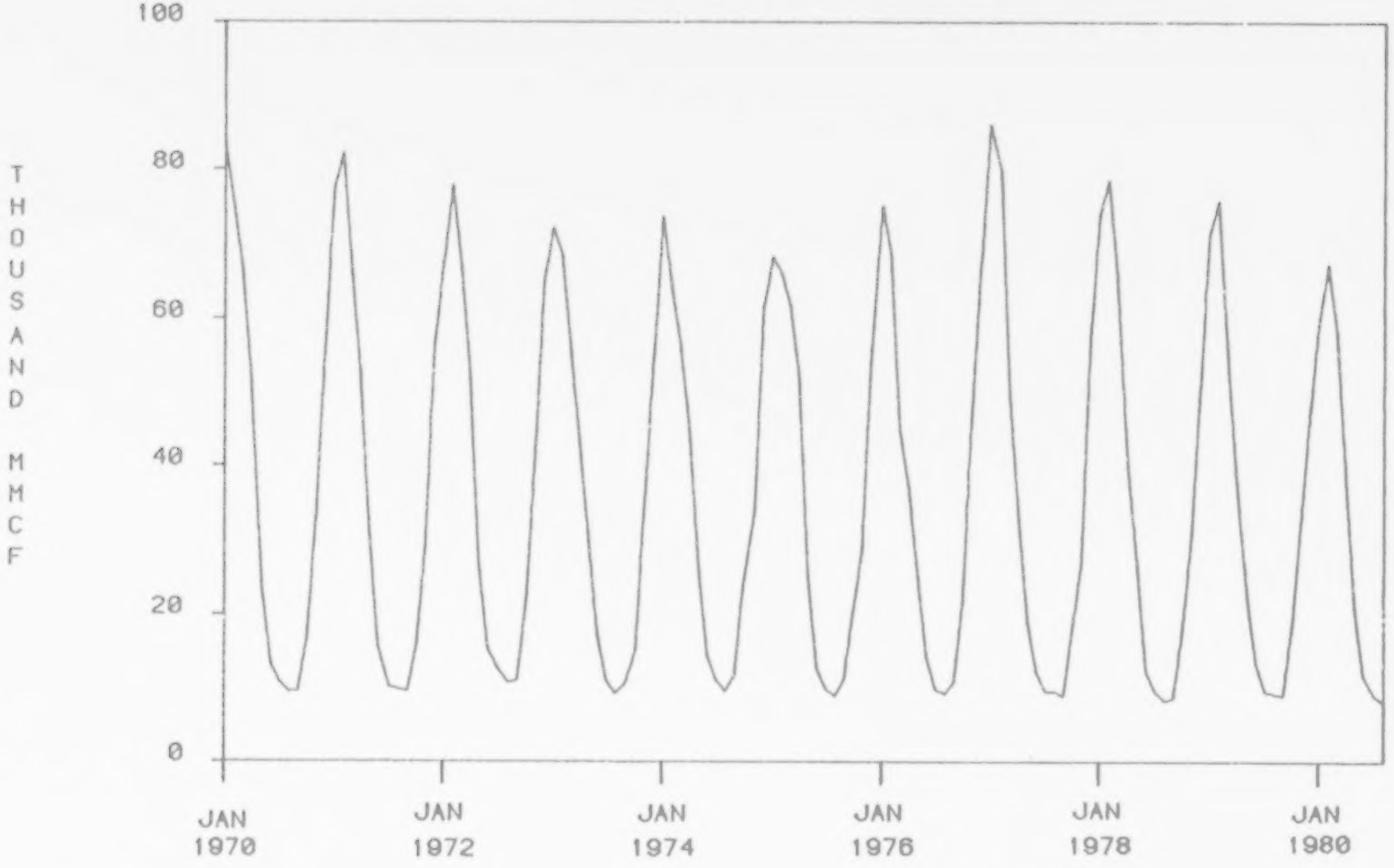
As a result of the cutoff of LNG deliveries, it is considered unlikely that the purchases of Ohio product will decline to 60,537 MMCF as projected in the Table 10, which exhibits a monthly comparison of actual and projected supplies, by source, for the eight major gas utilities. Actual natural gas supplies of individual utilities for the past two years are listed in Appendix B, Tables B-1 through B-8.

Historical Consumption

The regularities in the monthly time series behavior of residential, commercial, industrial and total natural gas consumption in Ohio, from January 1970 through August 1980, are displayed in Figures 11, 12, 13 and 14. The seasonal variation in residential and commercial consumption can easily be discerned from these illustrations. Natural gas usage in all sectors peaks during the heating season, and falls off during the cooling season. The effect of curtailments enforced on industry during the 1976-77 heating season is dramatically shown in Figure 13.

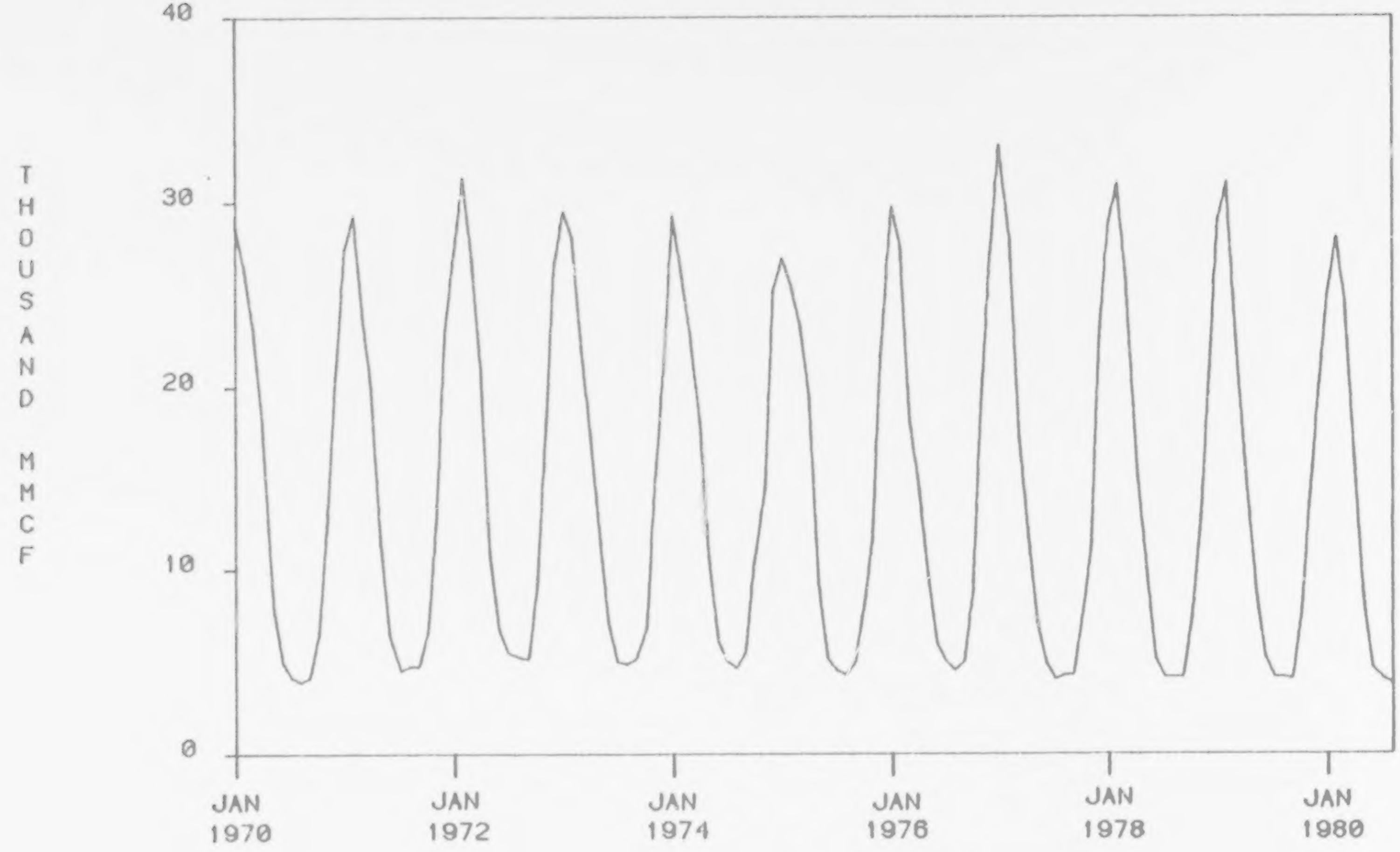
For the state as a whole, reported total annual requirements of natural gas between 1973 and 1979 have remained below the 1972 level. The behavior of total annual requirements of natural gas by Ohio end users can be observed in Figure 15. The greatest reduction in the reported requirements has taken place within the industrial end user class. This is due to the fact that industrial end users have lower priorities than residential or commercial end users in terms of their natural gas requirements. The aforementioned

FIGURE 11. MONTHLY OHIO RESIDENTIAL NATURAL GAS CONSUMPTION
JANUARY 1976 - AUGUST 1980



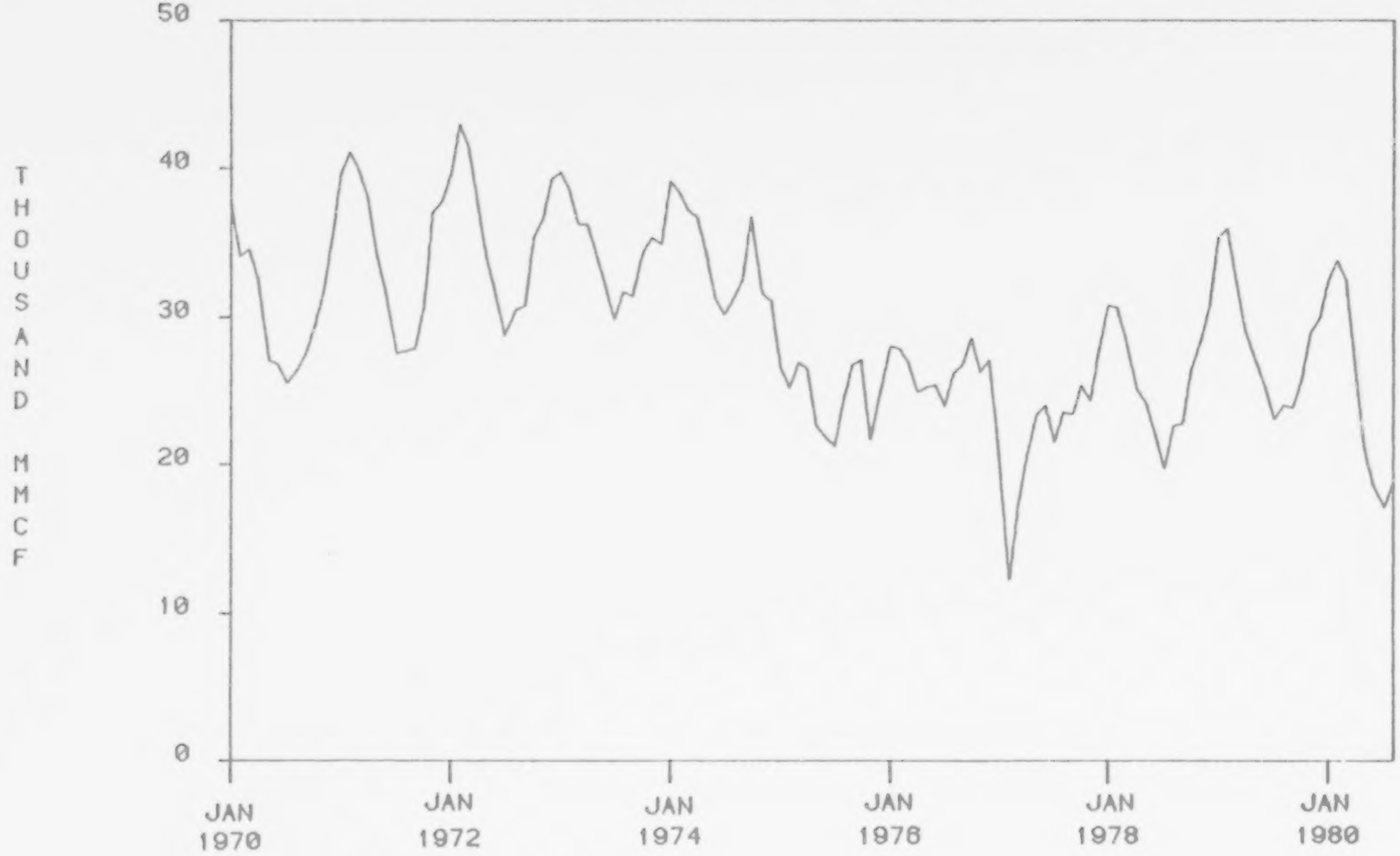
SOURCE: MONTHLY REPORTS OF EIGHT MAJOR GAS UTILITIES
AND THE OHIO DEPARTMENT OF ENERGY

FIGURE 12. MONTHLY OHIO COMMERCIAL NATURAL GAS CONSUMPTION
JANUARY 1970 - AUGUST 1980



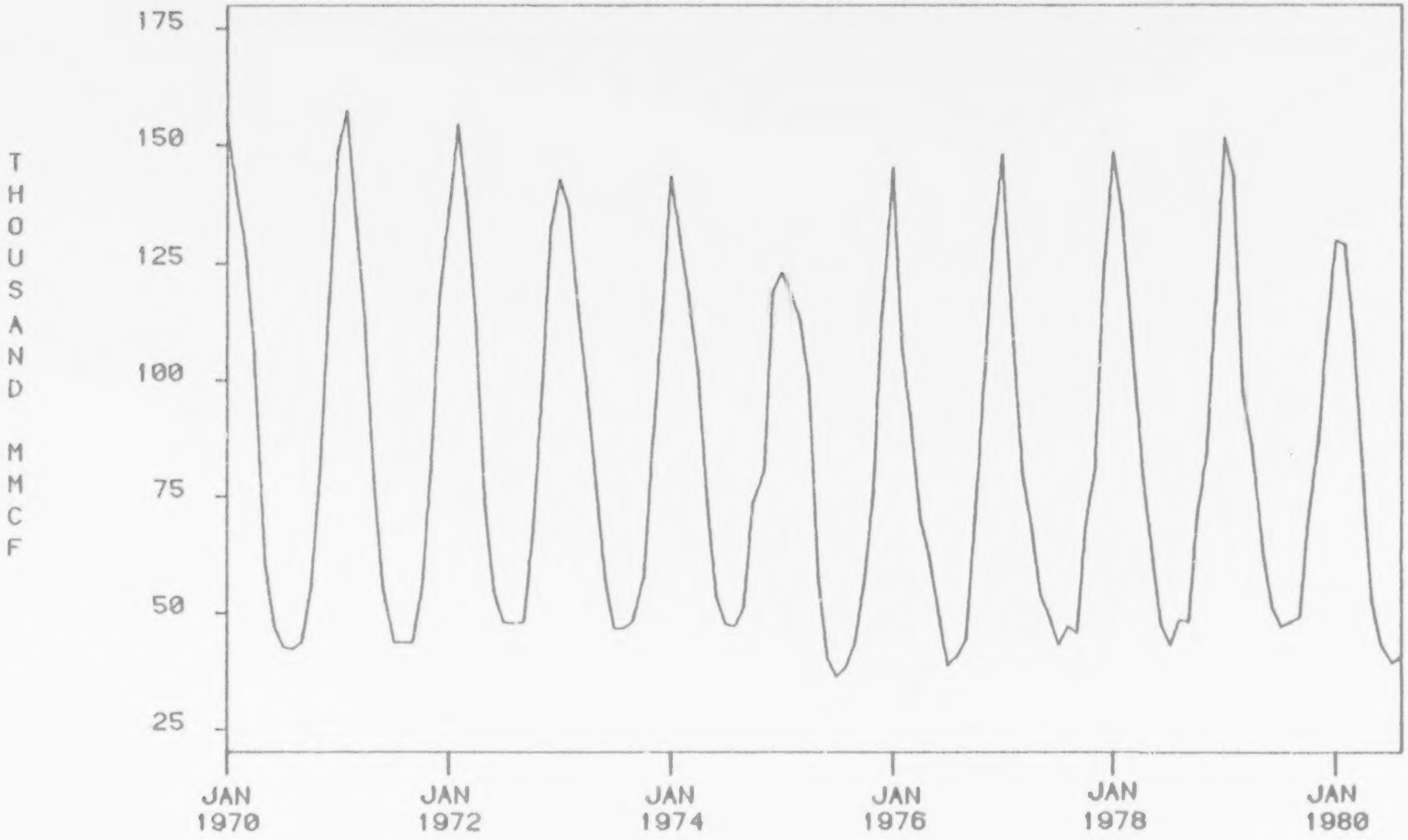
SOURCE: MONTHLY REPORTS OF EIGHT MAJOR GAS UTILITIES
AND THE OHIO DEPARTMENT OF ENERGY

FIGURE 13. MONTHLY OHIO INDUSTRIAL NATURAL GAS CONSUMPTION
JANUARY 1970 - AUGUST 1980



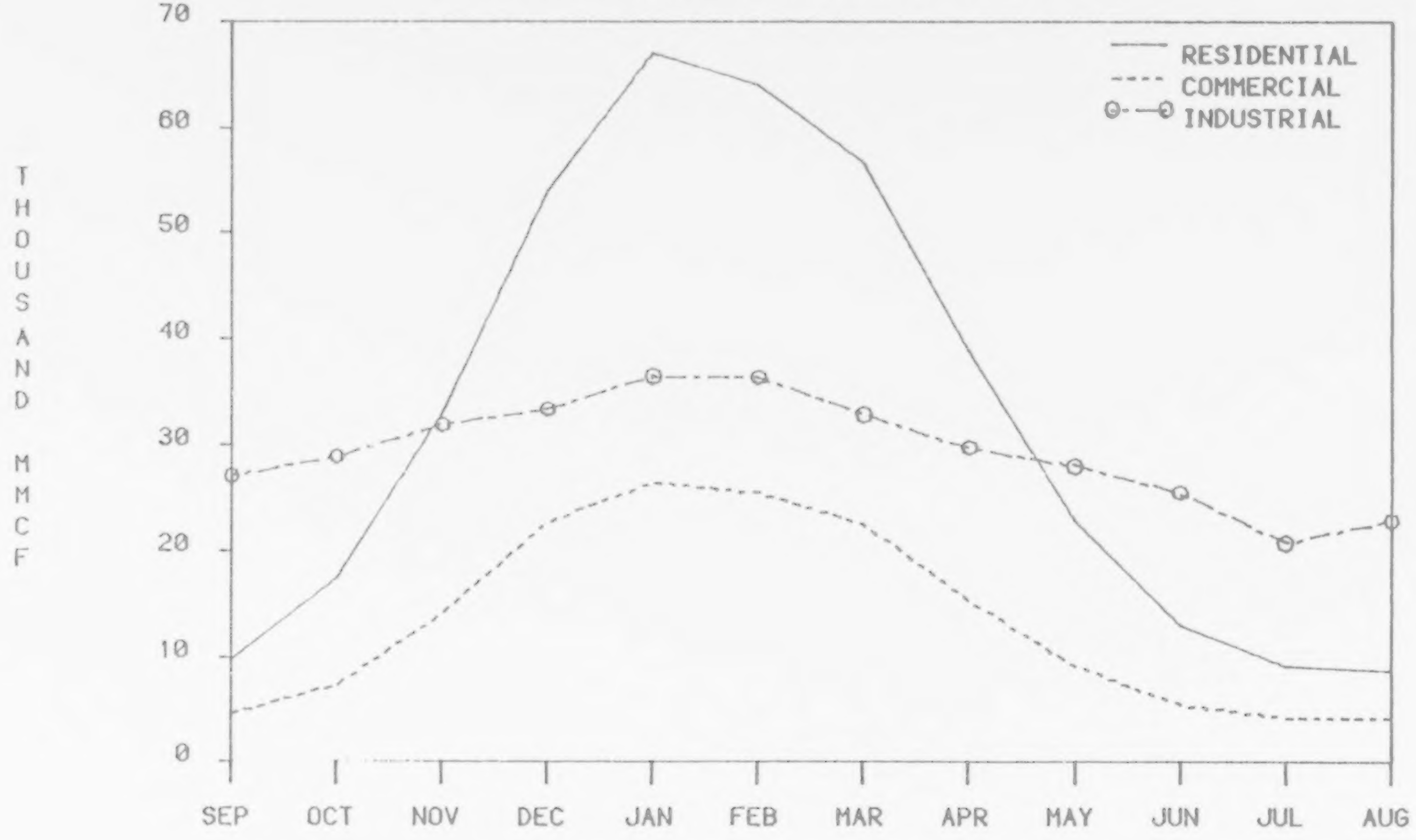
SOURCE: MONTHLY REPORTS OF EIGHT MAJOR GAS UTILITIES AND THE OHIO DEPARTMENT OF ENERGY

FIGURE 14. MONTHLY OHIO TOTAL NATURAL GAS CONSUMPTION
JANUARY 1970 - AUGUST 1980



SOURCE: MONTHLY REPORTS OF EIGHT MAJOR GAS UTILITIES
AND THE OHIO DEPARTMENT OF ENERGY

FIGURE 15. PROJECTED GAS REQUIREMENTS FOR OHIO BY SECTOR
EIGHT MAJOR COMPANIES (SEP.1980 - AUG.1981)



SOURCE: MONTHLY PROJECTIONS OF EIGHT MAJOR GAS COMPANIES AND THE OHIO DEPARTMENT OF ENERGY

Table 10. Comparison Between One Year of Actual and Forecast Supply for Eight Major Ohio Gas Utilities by Source (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
9/80	24459	17566	119	60	5769	149	675	10	0	4928	1732	153	3	57592
9/79	20257	14554	209	33	5592	110	595	9	0	6529	1321	149	-207	49151
	20.7%	20.7%	-43.1%	81.8%	3.2%	35.5%	13.4%	11.1%	0.0%	-24.5%	31.1%	2.7%	101.4%	17.2%
10/80	34047	24239	111	100	6075	151	711	0	0	4951	2439	153	-53	72924
10/79	32683	23709	161	100	6125	129	642	17	0	5864	1915	215	-322	71238
	4.2%	2.2%	-31.1%	0.0%	-0.8%	17.1%	10.7%	-100.0%	0.0%	-15.6%	27.4%	-28.8%	83.5%	2.4%
11/80	49254	17450	30	140	5346	150	579	0	0	5082	3641	12258	-40	93890
11/79	45104	16448	194	136	6075	153	534	28	0	6402	3145	8086	-111	86194
	9.2%	6.1%	-84.5%	2.9%	-12.0%	-2.0%	8.4%	-100.0%	0.0%	-20.6%	15.8%	51.6%	64.0%	8.9%
12/80	65954	24449	32	175	6252	154	520	42	0	4805	4781	17196	-40	124320
12/79	57177	15895	90	159	6429	142	621	37	0	6511	4131	18636	79	109907
	15.4%	53.8%	-64.4%	10.1%	-2.8%	8.5%	-16.3%	13.5%	0.0%	-26.2%	15.7%	-7.7%	-150.6%	13.1%
1/81	76160	31977	29	180	6185	156	580	44	0	4759	5091	15020	-20	140161
1/80	67963	27772	104	190	6612	157	686	43	0	6330	4396	15241	128	129622
	12.1%	15.1%	-72.1%	-5.3%	-6.5%	-0.6%	-15.5%	2.3%	0.0%	-24.8%	15.8%	-1.5%	-115.6%	8.1%
2/81	65035	31300	31	155	5714	130	640	37	0	4800	4026	10607	834	123309
2/80	71368	30792	92	191	6354	130	647	45	0	4737	3480	10791	-109	128518
	-8.9%	1.6%	-66.3%	-18.8%	-10.1%	0.0%	-1.1%	-17.8%	0.0%	1.3%	15.7%	-1.7%	865.1%	-4.1%
3/81	56212	23548	29	160	7525	156	632	30	0	5254	3750	9037	706	107039
3/80	59607	24208	151	158	6556	133	640	35	0	5604	3240	9356	72	109760
	-5.7%	-2.7%	-80.8%	1.3%	14.8%	17.3%	-1.3%	-14.3%	0.0%	-6.2%	15.7%	-3.4%	880.6%	-2.5%
4/81	40706	26658	195	100	6654	150	600	22	0	5167	2700	485	461	83898
4/80	37721	26040	226	95	5926	148	546	19	0	5861	2700	431	-61	79652
	7.9%	2.4%	-13.7%	5.3%	12.3%	1.4%	9.9%	15.8%	0.0%	-11.8%	0.0%	12.5%	855.7%	5.3%
5/81	29556	21589	201	10	6557	150	620	12	0	5171	2321	250	-25	66412
5/80	21705	16068	238	7	5818	139	566	9	0	5798	2040	286	-72	52602
	36.2%	34.4%	-15.5%	42.9%	12.7%	7.9%	9.5%	33.3%	0.0%	-10.8%	13.8%	-12.6%	65.3%	26.3%
6/81	22428	14910	195	7	6206	150	600	7	0	5351	1636	165	15	51670
6/80	16975	12588	259	5	5567	149	546	6	0	5514	1635	142	-117	43269
	32.1%	18.4%	-24.7%	40.0%	11.5%	0.7%	9.9%	16.7%	0.0%	-3.0%	0.1%	16.2%	112.8%	19.4%
7/81	17768	12317	263	7	6268	125	620	9	0	5138	1633	170	-5	44313
7/80	15453	9302	258	5	5881	153	606	6	0	6059	1486	153	-40	39322
	15.0%	32.4%	1.9%	40.0%	6.6%	-18.3%	2.3%	50.0%	0.0%	-15.2%	9.9%	11.1%	87.5%	12.7%
8/81	19950	12679	224	7	6318	125	620	9	0	5131	1661	165	-20	46869
8/80	16966	9763	256	6	5872	153	469	7	0	5495	1490	153	15	40645
	17.6%	29.9%	-12.5%	16.7%	7.6%	-18.3%	32.2%	28.6%	0.0%	-6.6%	11.5%	7.8%	-233.3%	15.3%
SUMMER TOTAL														
	188914	129958	1308	291	43847	1000	4446	69	0	35837	14122	1541	376	423678
	161760	112024	1607	251	40781	981	3970	73	0	41120	12587	1529	-804	375879
	16.8%	16.0%	-18.6%	15.9%	7.5%	1.9%	12.0%	-5.5%	0.0%	-12.8%	12.2%	0.8%	146.8%	12.7%
WINTER TOTAL														
	312615	128724	151	810	31022	746	2951	153	0	24700	21289	64118	1440	588719
	301219	115115	631	834	32026	715	3128	188	0	29584	18392	62110	59	564001
	3.8%	11.8%	-76.1%	-2.9%	-3.1%	4.3%	-5.7%	-18.6%	0.0%	-16.5%	15.8%	3.2%	2340.7%	4.4%
YEAR TOTAL														
	501529	258682	1459	1101	74869	1746	7397	222	0	60537	35411	65659	1816	1012397
	462979	227139	2238	1085	72807	1696	7098	261	0	70704	30979	63639	-745	939880
	8.3%	13.9%	-34.8%	1.5%	2.8%	2.9%	4.2%	-14.9%	0.0%	-14.4%	14.3%	3.2%	343.8%	7.7%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

reductions in interstate natural gas supplies have led to curtailments of industrial base allocations; which, in turn, have led to the implementation of effective natural gas conservation measures and conversions to alternative fuels, on the part of the curtailed industrial customers.

The passage of the Natural Gas Policy Act of 1978, which decontrolled some natural gas prices immediately, and which foresees the decontrol of all natural gas prices by the end of 1985, has already increased the availability of interstate natural gas supplies for Ohio. Along with the recent dramatic increases in the prices of major alternatives to natural gas (i.e., distillate fuel oils), the increased availability of interstate natural gas is expected to reverse the trend of declining natural gas consumption in Ohio in the coming years.

The declining availability of interstate natural gas supplies and the energy conservation programs in the 1972-1978 period have influenced the residential consumption of natural gas. The weather sensitivity of residential consumption has been declining continuously in the service areas of the four larger utilities from 1973 through 1978. As mentioned above, the increase in the price of fuel oil, along with greater availability of natural gas, seems to have stabilized the behavior of the weather sensitivity of residential natural gas consumption in 1979. This stability is demonstrated in Table 11, where the weather sensitivity of the residential requirements, in terms of increased MMCF's of natural gas consumed per unit increase in heating degree-days per annum, is listed by the service areas of the four largest distribution companies, for each year from 1970 through 1979. In addition to indicating the differences in the weather sensitivity of residential consumption across different utility service areas, the declining values of the weather sensitivity

Table 11. Weather Sensitivity of Residential Natural Gas Consumption in Ohio (1970-1980)

MMCF/Per Heating Degree-Day

Year	Cincinnati Gas and Electric	Columbia Gas	Dayton Power and Light	East Ohio Gas
1970	6.43	21.64	5.69	22.95
1971	6.96	24.04	6.04	23.57
1972	6.95	23.81	5.77	24.22
1973	6.78	23.68	5.72	23.04
1974	6.78	23.35	5.58	24.21
1975	6.83	22.73	5.61	24.34
1976	6.34	21.22	5.04	22.52
1977	5.15	18.95	4.79	20.44
1978	5.11	18.00	4.54	19.74
1979	5.10	18.48	4.53	20.68
1980*	5.00	17.86	4.27	19.07

*Based upon the first eight months of 1980.

Source: O.S.U. Gas Model, monthly reports of four Ohio gas utilities and the Ohio Department of Energy.

coefficients for every utility service area clearly testify to extensive gas conservation among significant numbers of residential customers over the six or seven years preceding 1979. Table 11, when considered with the fact that residential energy consumption in Ohio has not increased significantly since 1976, can be interpreted to reflect, in part, the effectiveness of the conservation promotion programs implemented by ODOE and others.

Since natural gas is the primary source of heating fuel for the residential and commercial sectors, over 60 percent of the natural gas consumed in Ohio is used during the winter heating season. Table 12 shows the actual and projected aggregate monthly demand by sector for the eight major distribution companies. Figure 15 shows projected monthly consumption by sector for Ohio.

Alternate Fuel Capability Profile

There have been no natural gas curtailments in the September 1979 - August 1980 annual period, and neither the reporting Ohio gas utilities nor the gas pipeline companies project any curtailments for the September 1980 - August 1981 annual period. Hence, there is no alternate fuel capability profile to be presented at this time.

The current supply projections of Columbia Gas Transmission Corporation, as per its FERC Form 16 of September 30, 1980, presume the resumption of LNG imports from Algeria by December 1980. Such imports have not yet started at the time this report is being prepared. However, given the general decline in natural gas requirements by all end user classes in recent years, and the increased flexibility in the supplies of interstate natural gas during the last several years, it is considered that sufficient supplies of interstate gas will be readily available to make up for a sustained cutoff of Algerian LNG throughout the 1980-81 heating season.

Table 12. Comparison Between One Year of Actual and Forecast Demand
for Eight Major Ohio Gas Utilities by Sector
(MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
9/80	87	9804	4611	27116	4470	9189	55190	-2402
9/79	87	8884	4128	23824	3272	9042	49150	-1
	0.0%	10.4%	11.7%	13.8%	36.6%	1.6%	12.3%	********%
10/80	334	17304	7323	28891	11882	7284	72684	-240
10/79	334	18049	7541	25671	12672	7305	71238	0
	0.0%	-4.1%	-2.9%	12.5%	-6.2%	-0.3%	2.0%	999.9%
11/80	690	32993	14086	31895	14426	0	93400	-490
11/79	686	32944	14140	28897	10175	38	86194	0
	0.6%	0.1%	-0.4%	10.4%	41.8%	-100.0%	8.4%	999.9%
12/80	1052	54039	22701	33443	13121	0	123304	-1016
12/79	1028	47863	20015	29823	11718	489	109908	1
	2.3%	12.9%	13.4%	12.1%	12.0%	-100.0%	12.2%	********%
1/81	1141	67019	26483	36561	7708	1326	139097	-1064
1/80	1124	59986	25106	32483	11613	434	129622	0
	1.5%	11.7%	5.5%	12.6%	-33.6%	205.5%	7.3%	999.9%
2/81	980	64113	25469	36467	-4870	1326	122505	-804
2/80	977	67433	27962	33771	-648	0	128518	0
	0.3%	-4.9%	-8.9%	8.0%	-651.5%	999.9%	-4.7%	999.9%
3/81	823	56803	22506	32924	-6437	0	105796	-1243
3/80	814	58253	24386	32514	-5402	9	109760	0
	1.1%	-2.5%	-7.7%	1.3%	-19.2%	-100.0%	-3.6%	999.9%
4/81	735	38885	15310	27756	-9131	8122	82942	-956
4/80	455	38860	16061	26741	-11181	9171	79652	0
	61.5%	0.1%	-4.7%	11.3%	18.3%	-11.4%	4.1%	999.9%
5/81	202	22830	9131	27993	-4727	10337	65564	-848
5/80	196	21128	8536	21225	-8869	10582	52602	0
	3.1%	8.1%	7.0%	31.9%	46.7%	-2.3%	24.6%	999.9%
6/81	30	12883	5424	25485	-2627	9902	51067	-603
6/80	29	11608	4711	18673	-1257	9534	43269	0
	3.4%	11.0%	15.1%	36.5%	-109.0%	3.9%	18.0%	999.9%
7/81	5	9024	4219	20712	169	9677	43801	-512
7/80	5	9145	4036	17120	145	8876	39322	0
	0.0%	-1.3%	4.5%	21.0%	16.6%	9.0%	11.4%	999.9%
8/81	11	8745	4098	22824	1730	[illegible]	46389	-480
8/80	11	8181	3892	18712	1099	[illegible]	40645	0
	0.0%	6.9%	5.3%	22.0%	57.4%	[illegible]	14.1%	999.9%
SUMMER TOTAL								
	1404	119475	50116	182777	1766	63503	417637	-6041
	1117	115855	48905	151966	-4119	63271	375878	-1
	25.7%	3.1%	2.5%	20.3%	142.9%	0.4%	11.1%	********%
WINTER TOTAL								
	4686	274967	111245	171290	23948	2652	584102	-4617
	4629	266479	111609	157488	27456	970	564002	1
	1.2%	3.2%	-0.3%	8.8%	-12.8%	173.4%	3.6%	********%
YEAR TOTAL								
	6090	394442	161361	354067	25714	66155	1001739	-10658
	5746	382334	160514	309454	23337	64241	939880	0
	6.0%	3.2%	0.5%	14.4%	10.2%	3.0%	6.6%	999.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Twelve-Month Outlook

With or without the LNG imports resumed at projected levels, the outlook for the next twelve months would indicate no serious shortages under normal weather conditions or under 10 percent colder than normal weather conditions.

In Table 19, we have constructed a scenario which assumes no resumption of Algerian LNG, and a consequent across the board cutoff of 2.2 percent from Columbia Gas Transmission Corporation. This supply situation is compared with 10 percent colder than normal winter requirements as projected by the ODOE.

It is estimated that a continued cutoff of LNG imports would reduce utilities projected 10 percent colder than normal weather supplies by approximately 8,739 MMCF, or by 1.47 percent, during the 1980-81 heating season. This is expected to translate into 5,007 MMCF, or 0.84 percent, deficiency for the state as a whole during the same period of time. In view of the prevailing abundance of interstate gas supplies, however, any shortage from traditional sources can be made up by other sources.

Utility Forecasts

Utility forecasts for the next twelve months project no deficiencies for Ohio under normal weather conditions. Aggregate supply and demand projections of the eight major utilities, as presented in Table 13 and Figure 16, indicate a 1.06 percent annual surplus of natural gas supplies over demand. All eight utilities project supply to be in excess of demand during the 1980-81 heating season as well as the 1981 cooling season. Supply and demand projections of the individual utilities, as submitted in their "Monthly Reports of Supply and Demand of Natural Gas," are summarized in Appendix B, Table B-17.

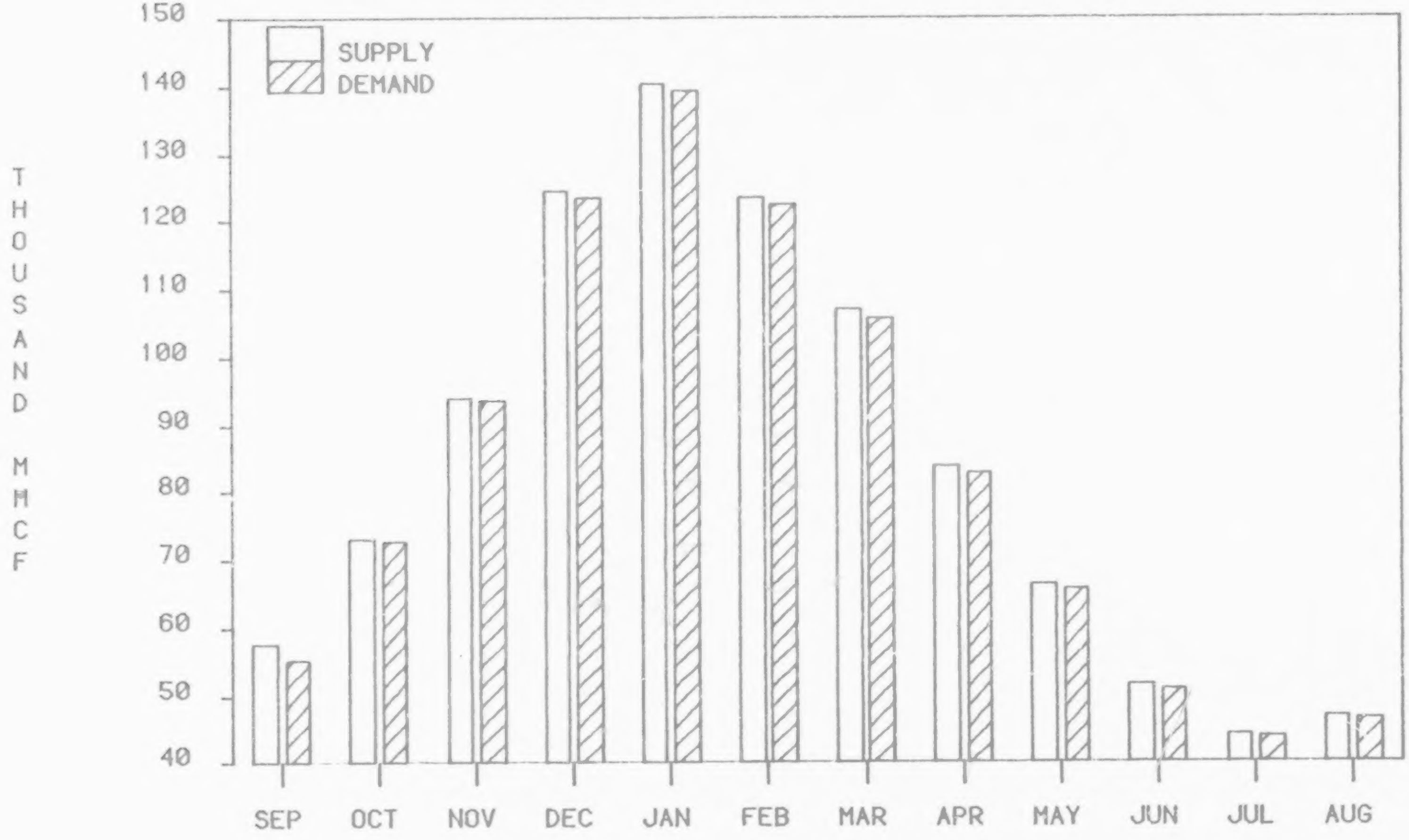
Table 13. Projected Aggregate Supply and Demand for Natural Gas for Eight Major Gas Utilities
September 1980 - August 1981
(MMCF)

Month/Year	9/80	10/80	11/80	12/80	1/81	2/81	3/81	4/81	5/81	6/81	7/81	8/81	Summer Totals	Winter Totals	Annual Totals
Supply	57,592	72,924	93,890	124,320	140,161	123,309	107,039	83,898	66,412	51,670	44,313	46,869	423,678	588,719	1,012,397
Demand	55,190	72,684	93,400	123,304	139,097	122,505	105,796	82,942	65,564	51,067	43,801	46,389	417,637	584,102	1,001,739
Deficiency	-2,402	-240	-490	-1,016	-1,064	-804	-1,243	-956	-848	-603	-512	-480	-6,041	-4,617	-10,658
Percent Deficiency	-4.2	-0.3	-0.5	-0.8	-0.8	-0.7	-1.2	-1.1	-1.3	-1.2	-1.2	-1.0	-1.4	-0.8	-1.1

Note: A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.

Source: ODOE Form SG-1 of eight major gas utilities and the Ohio Department of Energy.

FIG. 16. PROJECTED SUPPLY AND DEMAND OF NATURAL GAS FOR OHIO
EIGHT MAJOR COMPANIES (SEPTEMBER 1980 - AUGUST 1981)



SOURCE: MONTHLY PROJECTIONS OF EIGHT MAJOR GAS UTILITIES
AND THE OHIO DEPARTMENT OF ENERGY

Independent Forecast

The law which created the Ohio Department of Energy requires the development of independent ODOE forecasting capability within the department and the preparation of independent forecasts. Independent natural gas demand forecasts based on two alternate methodologies have been developed by ODOE for the eight major gas utilities serving Ohio. The first methodology employs regression analysis to forecast demand for each major utility as a function of the normal and 10 percent colder than normal temperature scenarios on the basis of the most recent ODOE Form SG-2's submitted by the respective utilities. The second methodology employed by the ODOE to forecast natural gas demand in each major utility service area is based upon Box-Jenkins type time series models of monthly natural gas requirements of the respective utilities between January 1970 and August 1980. Such models when properly identified yield projections that possess desirable statistical properties and are deemed to be as accurate as, or more accurate than, alternative short-term forecasting techniques. They also have the added flexibility of yielding updated forecasts every time the most recent actual monthly requirements are reported to ODOE. The use of alternative methodologies is expected to provide a double check and reduce forecasting error, and thus, lead to a more accurate and decisive diagnosis of impending shortages.

The results obtained on the basis of both methodologies are presented in Tables 14 through 18. It can be concluded from these tables that no shortages or curtailments of natural gas are expected during the 1980-81 heating season. However, to the extent that the supply forecasts of utilities used in Tables 14 through 18 do not reflect the influence of Algerian LNG

Table 14. Independent Forecasts of Natural Gas Supply and Demand for the Eight Major Ohio Gas Utilities
November 1980 - March 1981
(MMCF)

	Normal Weather			10% Colder Than Normal			10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	Demand	Deficiency	Supply	Demand	Deficiency	Supply	Demand	Deficiency
Cincinnati Gas & Electric	56,814	55,165	-1,649	60,273	59,131	-1,142	60,273	59,601	-672
Columbia Gas	210,786	208,454	-2,332	222,957	222,834	-123	222,957	214,730	-8,227
Dayton Power & Light	39,160	40,758	1,598	41,741	43,888	2,147	41,741	43,134	1,393
East Ohio Gas	210,337*	228,625	18,288*	221,949*	240,661	18,712*	221,949*	230,589	8,640*
National Gas	7,197	6,999	-198	7,055	7,000	-55	7,055	7,000	-55
Ohio Gas	9,047	4,189	-4,858	9,047	4,498	-4,549	9,047	4,498	-4,549
River Gas	2,912	2,912	0	3,083	3,083	0	3,083	3,083	0
West Ohio Gas	9,569	9,569	0	10,209	10,209	0	10,209	10,209	0
Total	545,822*	556,671	10,849*	576,314*	591,304	14,990*	576,314*	572,844	-3,470
Expected Adjustments to East Ohio Gas's Supplies	18,288	0	-18,288	18,712	0	-18,712	8,640	0	-8,640
Adjusted Total	564,110	556,671	-7,439	595,026	591,304	-3,722	584,954	572,844	-12,110

Notes: A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.
*Does not include expected supplies to East Ohio Gas from Consolidated Gas Supply Corporation's storage facilities in Pennsylvania. See notes to Table 18.

Source: November 1, 1980, ODOE Form SG-2 of reporting utilities, and the Ohio Department of Energy.

Table 15. Independent Forecasts of Gas Supply
and Demand for Cincinnati Gas and Electric Company
November 1980 - March 1981
(MMCF)

	Normal Weather				10% Colder Than Normal Weather				10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	HDD	Demand	Deficiency	Supply	HDD	Demand	Deficiency	Supply	Demand	Deficiency
November 1980	9,145	636	9,013	-132	9,663	700	9,608	-55	9,663	8,659	-1,004
December 1980	12,871	970	12,116	-755	13,657	1,067	13,017	-640	13,657	12,173	-1,484
January 1981	13,114	1,051	12,869	-245	13,965	1,156	13,844	-121	13,965	14,820	855
February 1981	11,404	888	11,355	-49	12,125	977	12,181	56	12,125	13,512	1,387
March 1981	10,280	722	9,812	-468	10,863	794	10,481	-382	10,863	10,437	-426
Total	56,814		55,165	-1,649	60,273		59,131	-1,142	60,273	59,601	-672

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.

Source: Cincinnati Gas & Electric's November 1, 1980, ODOE Form SG-2, and the Ohio Department of Energy.

Table 16. Independent Forecasts of Gas Supply
and Demand for Columbia Gas of Ohio
November 1980 - March 1981
(MMCF)

	Normal Weather				10% Colder Than Normal Weather				10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	HDD	Demand	Deficiency	Supply	HDD	Demand	Deficiency	Supply	Demand	Deficiency
November 1980	32,583	570	30,317	-2,266	33,931	627	32,056	-1,875	33,931	31,902	-2,029
December 1980	44,813	951	41,941	-2,872	47,191	1,046	44,849	-2,342	47,191	43,478	-3,713
January 1981	52,354	1,173	48,714	-3,640	55,389	1,290	52,284	-3,105	55,389	52,528	-2,861
February 1981	42,952	1,102	46,548	3,596	45,880	1,212	49,904	4,024	45,880	47,822	1,942
March 1981	38,084	918	40,934	2,850	40,566	1,010	43,741	3,175	40,566	39,000	-1,566
Total	210,786		208,454	-2,332	222,957		222,834	-123	222,957	214,730	-8,227

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days
A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.

Source: Columbia Gas of Ohio's November 1, 1980, ODOE Form SG-2, and the Ohio Department of Energy.

Table 17. Independent Forecasts of Gas Supply and Demand for Dayton Power and Light November 1980 - March 1981 (MMCF)

	Normal Weather				10% Colder Than Normal Weather				10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	HDD	Demand	Deficiency	Supply	HDD	Demand	Deficiency	Supply	Demand	Deficiency
November 1980	5,661	482	5,291	-370	5,964	530	5,628	-336	5,694	5,656	-38
December 1980	8,103	865	7,983	-120	8,614	952	8,595	-19	8,614	8,157	-457
January 1981	8,926	1,111	9,711	785	9,552	1,222	10,493	941	9,552	10,219	667
February 1981	9,381	1,135	9,881	500	10,029	1,249	10,683	654	10,029	11,100	1,071
March 1981	7,089	852	7,892	803	7,582	937	8,489	907	7,582	8,002	420
Total	39,160		40,758	1,598	41,741		43,888	2,147	41,741	43,134	1,393

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days
A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.

Source: Dayton Power and Light's November 1, 1980, ODOE Form SG-2, and the Ohio Department of Energy.

Table 18. Independent Forecasts of Gas Supply and Demand for East Ohio Gas
November 1980 - March 1981
(MMCF)

	Normal Weather				10% Colder Than Normal Weather				10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply*	HDD	Demand	Deficiency*	Supply*	HDD	Demand	Deficiency*	Supply *	Demand	Deficiency *
November 1980	34,029	534	34,973	944	35,706	587	36,296	590	35,706	36,586	880
December 1980	44,704	983	46,185	1,481	47,297	1,081	48,632	1,335	47,297	46,446	-851
January 1981	48,797	1,197	51,528	2,731	51,639	1,317	54,524	2,885	51,639	55,437	3,798
February 1981	43,999	1,155	50,479	6,480	46,418	1,271	53,376	6,958	46,418	51,256	4,838
March 1981	38,808	954	45,460	6,652	40,889	1,049	47,833	6,944	40,889	40,824	-65
Total	210,337		228,625	18,288	221,949		240,661	18,712	221,949	230,549	8,600

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days
A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.
*East Ohio Gas Company's supply projections do not include its share of entitlement to supplies from Consolidated Gas Supply Corporation's storage facilities in Pennsylvania. Historically, East Ohio Gas has not curtailed its customers. The deficiency figures for East Ohio Gas should be interpreted as the projected magnitude of expected supplies from the above mentioned storage facilities.

Source: East Ohio Gas Company's November 1, 1980, ODOE Form SG-2, and the Ohio Department of Energy.

cutoff on Columbia Gas Transmission Corporation's ability to meet its contract obligations for the 1980-81 heating season, Table 19 (which adjusts for continued cutoff of Algerian LNG imports) represents a more conservative interpretation of the projected supply and demand situation for natural gas in Ohio during the 1980-81 heating season.

Table 19. Independent Forecasts of 10% Colder Than Normal Weather Natural Gas Supply and Demand for the Eight Major Ohio Gas Utilities Assuming Cutoff of Algerian LNG
November 1980 - March 1981
(MMCF)

	Total Supply	Estimated Share of LNG in Total Supply	Supply Assuming Cutoff of LNG	Demand	Deficiency
Cincinnati Gas & Electric	60,273	1,120	59,153	59,131	-22
Columbia Gas of Ohio	222,957	4,579	218,378	222,834	4,456
Dayton Power & Light	41,741	2,215	39,526	43,888	4,362
East Ohio Gas	221,949*	0	221,949*	240,661	18,712*
National Gas & Oil	7,055	1	7,054	7,000	-54
Ohio Gas	9,047	0	9,047	4,498	-4,549
River Gas	3,083	0	3,083	3,083	0
West Ohio Gas	10,209	824	9,385	10,209	824
Total	576,314*	8,739	567,575*	591,304	23,729*
Expected Adjustments to East Ohio Gas's Supplies	18,712	0	18,712		-18,712
Adjusted Total	595,026	8,739	586,287	591,304	5,017

Notes: A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.
*Does not include expected supplies to East Ohio Gas from Consolidated Gas Supply Corporation's storage facilities in Pennsylvania. See notes to Table 18.

Source: ODOE Form SG-2 of eight major Ohio gas utilities; FERC-16 Forms of Consolidated Gas Supply Corp. and Columbia Gas Transmission Corp.; and the Ohio Department of Energy.

APPENDIX A

FORECAST OF ELECTRICITY DEMAND
BY UTILITY

Table A-1. Allegheny Power System:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1979-1980)	Utility Forecast (1980-1981)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1980-1981)	Forecast % Change (ODOE Forecast vs. Actual)
November	2590	2528	-2.4	2540	-1.9
December	2810	2828	0.6	2775	-1.2
January	3010	3036	0.9	2967	-1.4
February	2893	2819	-2.6	2726	-5.7
March	2878	2851	-0.9	2706	-5.9
April	2512	2584	2.9	2454	-2.3
May	2404	2589	7.7	2427	0.9
June	2316	2514	8.5	2378	2.7
July	2483	2623	5.6	2445	-1.5
August	2614	2725	4.2	2562	-2.0
September	2453	2607	6.3	2494	1.7
October	2605	2717	4.3	2560	-1.7

*Source of demand figures is FPC Form 12E-2 and Form ERA-119M.

Table A-2. American Electric Power:*
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1979-1980)	Utility Forecast (1980-1981)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1980-1981)	Forecast % Change (ODOE Forecast vs. Actual)
November	6201	6317	1.9	6465	4.3
December	6701	7136	6.5	7032	4.9
January	7159	7930	10.8	7644	6.8
February	6934	7122	2.7	6986	0.7
March	6860	7060	2.9	6843	-0.3
April	5914	6303	6.6	6057	2.4
May	5667	6228	9.9	5908	4.3
June	5543	6079	9.7	5841	5.4
July	6091	6329	3.9	6044	-0.8
August	6229	6647	9.9	6379	2.4
September	5745	6269	9.1	5850	1.8
October	6056	6431	6.2	6137	1.3

*Does not include Columbus and Southern Ohio Electric Company.
**Source of demand figures is FPC Form 12E-2, and Form ERA-119M.

Table A-3. Cincinnati Gas and Electric:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1979-1980)	Utility Forecast (1980-1981)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1980-1981)	Forecast % Change (ODOE Forecast vs. Actual)
November	1184	1179	0.8	1215	2.6
December	1287	1347	4.7	1334	3.7
January	1371	1487	8.5	1439	5.0
February	1337	1294	-3.2	1331	-0.4
March	1310	1247	-4.8	1297	-1.0
April	1126	1137	1.0	1156	2.7
May	1128	1206	6.9	1193	5.8
June	1214	1284	5.8	1320	7.9
July	1526	1455	-4.7	1427	-6.5
August	1547	1469	-5.0	1446	-6.5
September	1263	1225	-3.0	1273	0.8
October		1185		1231	

*Source of demand figures is FPC Form 12E-2. October actual figure unavailable.

Table A-4. Cleveland Electric Illuminating: Forecast of Electric Energy Demand (1000 MWH)

	Actual Demand* (1979-1980)	Utility Forecast (1980-1981)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1980-1981)	Forecast % Change (ODOE Forecast vs. Actual)
November	1530	1578	3.1	1500	-2.0
December	1611	1654	2.7	1586	-1.6
January	1717	1709	-0.5	1661	-3.3
February	1629	1507	-7.5	1531	-6.0
March	1656	1623	-2.0	1592	-3.9
April	1474	1519	3.1	1470	-0.3
May	1445	1584	9.6	1514	4.8
June	1445	1642	13.6	1539	6.5
July	1563	1708	9.3	1601	2.4
August	1633	1716	5.1	1634	0
September	1486	1584	6.6	1508	1.5
October	1527	1636	7.1	1533	0.4

*Source of demand figures is FPC Form 12, Schedule 14, Column 9.

Table A-5. Columbus and Southern Ohio Electric:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1979-1980)	Utility Forecast (1980-1981)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1980-1981)	Forecast % Change (ODOE Forecast vs. Actual)
November	752	843	12.1	774	2.9
December	816	945	15.8	853	4.5
January	881	1055	19.8	924	4.9
February	847	863	1.9	846	-0.1
March	853	831	-2.6	831	-0.3
April	717	757	5.6	730	1.8
May	699	831	18.9	842	6.2
June	726	885	21.9	802	10.5
July	902	959	6.3	870	-3.5
August	920	927	0.8	879	-4.5
September	772	842	9.1	786	1.8
October	748	831	11.1	779	4.1

*Source of demand figure is FPC Form 12E-2.

Table A-6. Dayton Power and Light:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1979-1980)	Utility Forecast (1980-1981)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1980-1981)	Forecast % Change (ODOE Forecast vs. Actual)
November	878	889	1.3	867	-1.3
December	938	995	6.1	948	1.1
January	1024	1044	2.0	1048	2.3
February	990	966	-2.4	976	-1.4
March	948	932	-1.7	927	-2.2
April	819	831	1.5	807	-1.5
May	758	823	-8.6	777	2.5
June	791	862	9.0	825	4.3
July	959	965	0.6	898	-6.4
August	972	941	-3.2	945	-2.8
September	846	838	-0.9	840	-0.7
October		883		860	

*Source of demand figures is FPC Form 12E-2. October actual figure unavailable.

Table A-7. Ohio Edison System:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1979-1980)	Utility Forecast (1980-1981)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1980-1981)	Forecast % Change (ODOE Forecast vs. Actual)
November	1972	1923	-2.5	1904	-3.4
December	2070	2033	-1.8	2007	-3.0
January	2247	2241	-0.3	2131	-5.2
February	2142	1983	-7.4	1946	-9.2
March	2141	2128	-0.6	1985	-7.3
April	1883	2016	7.1	1791	-4.9
May	1806	1902	5.3	1780	-1.4
June	1793	2038	13.7	1810	0.9
July	1998	2114	5.8	1968	-1.5
August	2088	2146	2.8	2090	0.1
September	1899	1968	3.6	1916	0.9
October	1998	2042	2.2	2110	5.6

*Source of demand figures is FPC Form 12E-2.

Table A-8. Ohio Valley Electric Corporation:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1979-1980)	Utility Forecast (1980-1981)	Forecast % Change (ODOE Forecast vs. Actual)
November	554	1346	143.0
December	594	1370	130.6
January	594	1357	128.5
February	547	1219	122.9
March	587	1378	134.8
April	575	1341	133.2
May	592	1360	129.7
June	483	1277	164.4
July	500	1419	183.8
August	500	1363	172.6
September	483	1307	170.6
October	596	1407	136.1

*Source of demand figures is FPC Form 12E-2 and Form ERA-119M.

Table A-9. Toledo Edison Company:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1979-1980)	Utility Forecast (1980-1981)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1980-1981)	Forecast % Change (ODOE Forecast vs. Actual)
November	664	684	3.0	653	-1.7
December	676	741	9.6	677	0.1
January	743	741	-0.3	741	-0.3
February	700	705	0.7	677	-3.3
March	709	702	-1.0	679	-4.2
April	607	663	9.2	593	-2.3
May	580	658	13.4	593	2.2
June	583	675	15.8	624	7.0
July	643	697	8.4	664	3.3
August	680	721	6.0	691	1.6
September	604	688	13.9	632	4.6
October		690		676	

*Source of demand figures is FPC Form 12E-2. October actual figure unavailable.

Table A-10. Forecast of Ohio Electricity Demand - Residential Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	Forecast (1980-1981)	Upper 95% Confidence Limit	Actual (1979-1980)	Forecast Percentage Change
November	1,894.9	2,247.5	2,600.0	2,175.4	3.3
December	2,288.6	2,652.9	3,017.2	2,541.1	4.4
January	2,736.6	3,112.2	3,487.9	2,946.4	5.6
February	2,774.3	3,161.0	3,547.8	2,978.8	6.1
March	2.509.6	2,907.0	3,304.4	2,827.9	2.8
April	2,043.7	2,451.6	2,859.5	2,374.0	3.3
May	1,612.6	2,030.6	2,448.7	1,955.3	3.9
June	1,597.1	2,066.9	2,536.7	1,942.2	6.4
July	1,742.0	2,273.4	2,805.4	2,387.1	- 4.8
August	2,078.8	2,620.2	3,163.2	2,711.1	- 3.4
September	1,857.3	2,408.7	2,960.3	2,560.5	- 5.9
October	1,568.5	2,130.3	2,690.6	2,012.9	5.8

Notes:

1. The forecast is based on the monthly comparative summary statistics of the Ohio Electric Utilities Institute for eight major investor-owned electric utilities (excluding OVEC).
2. Forecast by ODOE.

Table A-11. Forecast of Ohio Electricity Demand - Commercial Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	Forecast (1980-1981)	Upper 95% Confidence Limit	Actual (1979-1980)	Forecast Percentage Change
November	1,490.3	1,648.0	1,805.7	1,550.2	6.3
December	1,584.2	1,749.4	1,914.5	1,642.2	6.5
January	1,683.6	1,856.0	2,028.4	1,732.7	7.1
February	1,710.8	1,890.1	2.069.4	1,785.8	5.8
March	1,576.5	1,762.4	1,948.3	1,720.5	2.4
April	1,446.6	1,638.9	1,831.2	1,596.7	2.6
May	1,376.9	1,575.4	1,773.9	1,518.9	3.7
June	1,520,8	1,737.9	1,955.1	1,622.4	7.1
July	1,602.5	1,860.0	2,094.3	1,830.1	1.6
August	1,665.8	1,918.0	2,170.6	1,946.0	- 1.4
September	1,650.2	1,908.0	2,167.7	1,907.2	0
October	1,438.6	1,703.0	1,968.5	1,617.6	5.3

Notes:

1. The forecast is based on the monthly comparative summary statistics of the Ohio Electric Utilities Institute for eight major investor-owned electric utilities (excluding OVEC).
2. Forecast by ODOE.

Table A-12. Forecast of Ohio Electricity Demand - Industrial Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	Forecast (1980-1981)	Upper 95% Confidence Limit	Actual (1979-1980)	Forecast Percentage Change
November	3,460.3	3,796.4	4,132.5	4,032.8	-5.9
December	3,277.7	3,689.3	4,100.9	3,920.5	-5.9
January	3,302.6	3,777.8	4,253.1	4,055.4	-6.8
February	3,226.0	3,757.3	4,288.7	4,143.9	-9.3
March	3,293.1	3,875.2	4,457.3	4,196.2	-7.6
April	3,162.5	3,791.2	4,420.0	4,006.3	-5.4
May	3,115.2	3,787.3	4,459.4	3,785.3	0.1
June	3,013.7	3,726.7	4,439.4	3,616.0	3.1
July	2,833.4	3,584.9	4,336.3	3,475.9	3.1
August	2,933.2	3,721.3	4,509.5	3,621.3	2.8
September	2,922.5	3,745.7	4,568.8	3,806.1	-1.6
October	2,934.0	3,815.5	4,696.9	3,910.3	-2.4

Notes: 1. The Forecast is based on the monthly comparative summary statistics of the Ohio Electric Utilities Institute for eight major investor-owned electric utilities (excluding OVEC).

2. Forecast by ODOE.

Table A-13. Forecast of Ohio Electricity Demand - All Sectors
(1000 MWH)

Month	Lower 95% Confidence Limit	Forecast (1980-1981)	Upper 95% Confidence Limit	Actual (1979-1980)	Forecast Percentage Change
November	7,840.0	8,435.5	9,031.1	8,217.1	2.7
December	8,149.0	8,878.4	9,607.7	8,582.2	3.5
January	8,757.0	9,599.2	10,441.1	9,244.2	3.8
February	8,692.2	9,633.8	10,575.5	9,419.9	2.3
March	8,285.1	9,316.6	10,348.1	9,245.0	0.8
April	7,500.0	8,614.2	9,728.3	8,439.5	2.1
May	7,250.0	8,441.1	9,632.1	7,704.9	9.6
June	6,936.1	8,199.4	9,462.7	7,624.6	7.5
July	7,231.4	8,563.1	9,894.7	8,170.8	4.8
August	7,629.5	9,026.2	10,422.8	8,765.4	3.0
September	7,466.2	8,925.0	10,383.7	8,757.3	1.9
October	6,960.9	8,555.5	10,150.0	8,006.5	6.9

Notes:

1. The forecast is based on the monthly comparative summary statistics of the Ohio Electric Utilities Institute for eight major investor-owned electric utilities (excluding OVEC).
2. Forecast by ODOE.

APPENDIX B

FORECAST OF NATURAL GAS DEMAND BY UTILITY

Table B-1. Comparison Between Two Years of Actual Gas Supply for
Cincinnati Gas and Electric Company
(MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
9/79	2713	0	209	0	0	0	0	9	0	154	214	0	0	3299
9/78	2890	0	141	0	0	0	0	8	0	136	293	0	0	3468
	-6.1%	0.0%	48.2%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	13.2%	-27.0%	0.0%	0.0%	-4.9%
10/79	5628	0	161	0	0	0	0	17	0	206	338	0	0	6350
10/78	5803	0	107	0	0	0	0	18	0	146	391	0	0	6465
	-3.0%	0.0%	50.5%	0.0%	0.0%	0.0%	0.0%	-5.6%	0.0%	41.1%	-13.6%	0.0%	0.0%	-1.8%
11/79	7963	0	194	0	0	0	0	28	0	181	557	0	0	8923
11/78	7767	0	42	0	0	0	0	25	0	139	644	0	0	8617
	2.5%	0.0%	361.9%	0.0%	0.0%	0.0%	0.0%	12.0%	0.0%	30.2%	-13.5%	0.0%	0.0%	3.6%
12/79	10608	0	90	0	0	0	0	37	0	190	742	1	0	11668
12/78	11256	0	42	0	0	0	0	39	0	162	857	22	0	12378
	-5.8%	0.0%	114.3%	0.0%	0.0%	0.0%	0.0%	-5.1%	0.0%	17.3%	-13.4%	-95.5%	0.0%	-5.7%
1/80	12411	0	104	0	0	0	0	43	0	197	784	3	0	13542
1/79	15159	0	23	0	0	0	0	55	0	188	907	69	0	16401
	-18.1%	0.0%	352.2%	0.0%	0.0%	0.0%	0.0%	-21.8%	0.0%	4.8%	-13.6%	-95.7%	0.0%	-17.4%
2/80	12578	0	92	0	0	0	0	45	0	213	751	2	0	13681
2/79	13115	0	14	0	0	0	0	48	0	159	867	56	0	14259
	-4.1%	0.0%	557.1%	0.0%	0.0%	0.0%	0.0%	-6.3%	0.0%	34.0%	-13.4%	-96.4%	0.0%	-4.1%
3/80	10029	0	151	0	0	0	0	35	0	207	673	6	0	11101
3/79	8517	0	60	0	0	0	0	28	0	146	778	27	0	9556
	17.8%	0.0%	151.7%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	41.8%	-13.5%	-77.8%	0.0%	16.2%
4/80	5598	0	226	0	0	0	0	19	0	238	521	0	0	6602
4/79	6453	0	121	0	0	0	0	21	0	180	521	0	0	7296
	-13.2%	0.0%	86.8%	0.0%	0.0%	0.0%	0.0%	-9.5%	0.0%	32.2%	0.0%	0.0%	0.0%	-9.5%
5/80	2567	0	238	0	0	0	0	9	0	140	387	0	0	3341
5/79	4072	0	211	0	0	0	0	11	0	193	387	0	0	4874
	-37.0%	0.0%	12.8%	0.0%	0.0%	0.0%	0.0%	-18.2%	0.0%	-27.5%	0.0%	0.0%	0.0%	-31.5%
6/80	2165	0	259	0	0	0	0	6	0	41	306	0	0	2777
6/79	3035	0	200	0	0	0	0	8	0	189	306	0	0	3738
	-28.7%	0.0%	29.5%	0.0%	0.0%	0.0%	0.0%	-25.0%	0.0%	-78.3%	0.0%	0.0%	0.0%	-25.7%
7/80	2129	0	258	0	0	0	0	6	0	72	294	0	0	2759
7/79	2799	0	245	0	0	0	0	8	0	195	294	0	0	3541
	-23.9%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	-25.0%	0.0%	-63.1%	0.0%	0.0%	0.0%	-22.1%
8/80	2592	0	256	0	0	0	0	7	0	49	294	0	0	3198
8/79	2959	0	0	0	0	0	0	8	0	212	294	0	0	3473
	-12.4%	0.0%	999.9%	0.0%	0.0%	0.0%	0.0%	-12.5%	0.0%	-76.9%	0.0%	0.0%	0.0%	-7.9%
SUMMER TOTAL														
	23392	0	1607	0	0	0	0	73	0	900	2354	0	0	28326
	28011	0	1025	0	0	0	0	82	0	1251	2486	0	0	32855
	-16.5%	0.0%	56.8%	0.0%	0.0%	0.0%	0.0%	-11.0%	0.0%	-28.1%	-5.3%	0.0%	0.0%	-13.8%
WINTER TOTAL														
	53589	0	631	0	0	0	0	188	0	988	3507	12	0	58915
	55814	0	181	0	0	0	0	195	0	794	4053	174	0	61211
	-4.0%	0.0%	248.6%	0.0%	0.0%	0.0%	0.0%	-3.6%	0.0%	24.4%	-13.5%	-93.1%	0.0%	-3.8%
YEAR TOTAL														
	76981	0	2238	0	0	0	0	261	0	1888	5861	12	0	87241
	83825	0	1206	0	0	0	0	277	0	2045	6539	174	0	94066
	-8.2%	0.0%	85.6%	0.0%	0.0%	0.0%	0.0%	-5.8%	0.0%	-7.7%	-10.4%	-93.1%	0.0%	-7.3%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-2. Comparison Between Two Years of Actual Gas Supply for Columbia Gas of Ohio (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
9/79	14777	0	0	0	0	0	0	0	0	530	933	0	-158	16082
9/78	14212	0	0	0	0	0	0	0	0	501	1268	0	-210	15771
	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	-26.4%	0.0%	24.8%	2.0%
10/79	22526	0	0	0	0	0	0	0	0	528	1514	0	-224	24344
10/78	22956	0	0	0	0	0	0	0	0	599	1755	0	-123	25187
	-1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-11.9%	-13.7%	0.0%	-82.1%	-3.3%
11/79	30198	0	0	0	0	0	0	0	0	623	2114	0	-60	32875
11/78	28386	0	0	0	0	0	0	0	0	766	2449	0	32	31633
	6.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-18.7%	-13.7%	0.0%	-287.5%	3.9%
12/79	37908	0	0	0	0	0	0	0	0	615	2725	0	142	41390
12/78	40203	0	0	0	0	0	0	0	0	223	3158	0	298	43882
	-5.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	175.8%	-13.7%	0.0%	-52.3%	-5.7%
1/80	45837	0	0	0	0	0	0	0	0	495	2872	0	99	49303
1/79	53298	0	0	0	0	0	0	0	0	399	3328	0	-6	57019
	-14.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.1%	-13.7%	0.0%	1750.0%	-13.5%
2/80	46193	0	0	0	0	0	0	0	0	562	2618	0	-131	49242
2/79	49007	0	0	0	0	0	0	0	0	534	3033	0	-60	52514
	-5.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	-13.7%	0.0%	-118.3%	-6.2%
3/80	39486	0	0	0	0	0	0	0	0	396	2468	0	-44	42306
3/79	33117	0	0	0	0	0	0	0	0	436	2860	0	203	36616
	19.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-9.2%	-13.7%	0.0%	-121.7%	15.5%
4/80	25296	0	0	0	0	0	0	0	0	437	2102	0	-85	27750
4/79	27367	0	0	0	0	0	0	0	0	578	2102	0	-22	30025
	-7.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-24.4%	0.0%	0.0%	-286.4%	-7.6%
5/80	15528	0	0	0	0	0	0	0	0	489	1595	0	-99	17513
5/79	18818	0	0	0	0	0	0	0	0	588	1595	0	-149	20852
	-17.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-16.8%	0.0%	0.0%	33.6%	-16.0%
6/80	12209	0	0	0	0	0	0	0	0	506	1289	0	-34	13970
6/79	13792	0	0	0	0	0	0	0	0	558	1289	0	-217	15422
	-11.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-9.3%	0.0%	0.0%	84.3%	-9.4%
7/80	11122	0	0	0	0	0	0	0	0	481	1158	0	3	12764
7/79	12363	0	0	0	0	0	0	0	0	480	1158	0	-300	13701
	-10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	101.0%	-6.8%
8/80	12097	0	0	0	0	0	0	0	0	465	1174	0	37	13773
8/79	13418	0	0	0	0	0	0	0	0	513	1174	0	152	15257
	-9.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-9.4%	0.0%	0.0%	-75.7%	-9.7%
SUMMER TOTAL														
	113555	0	0	0	0	0	0	0	0	3436	9765	0	-560	126196
	122926	0	0	0	0	0	0	0	0	3817	10341	0	-869	136215
	-7.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-10.0%	-5.6%	0.0%	35.6%	-7.4%
WINTER TOTAL														
	199622	0	0	0	0	0	0	0	0	2691	12797	0	6	215116
	204011	0	0	0	0	0	0	0	0	2358	14828	0	467	221664
	-2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.1%	-13.7%	0.0%	-98.7%	-3.0%
YEAR TOTAL														
	313177	0	0	0	0	0	0	0	0	6127	22562	0	-554	341312
	326937	0	0	0	0	0	0	0	0	6175	25169	0	-402	357879
	-4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.8%	-10.4%	0.0%	-37.8%	-4.6%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-3. Comparison Between Two Years of Actual Gas Supply for
Dayton Power and Light Company
(MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
9/79	2263	0	0	0	4	0	0	0	0	0	140	0	0	2407
9/78	2373	0	0	0	3	0	0	0	0	0	186	0	0	2562
	-4.6%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	-24.7%	0.0%	0.0%	-6.0%
10/79	3654	0	0	0	7	0	0	0	0	0	0	0	0	3661
10/78	3525	0	0	0	9	0	0	0	0	0	253	0	0	3787
	3.7%	0.0%	0.0%	0.0%	-22.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-3.3%
11/79	5634	0	0	0	14	0	0	0	0	0	384	0	0	6032
11/78	4312	0	0	0	13	0	0	0	0	0	443	0	431	5199
	30.7%	0.0%	0.0%	0.0%	7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	-13.3%	0.0%	-100.0%	16.0%
12/79	7099	0	0	0	17	0	0	0	0	0	544	0	0	7660
12/78	7105	0	0	0	19	0	0	0	0	0	249	0	627	8000
	-0.1%	0.0%	0.0%	0.0%	-10.5%	0.0%	0.0%	0.0%	0.0%	0.0%	118.5%	0.0%	-100.0%	-4.3%
1/80	7774	0	0	0	21	0	0	0	0	0	611	0	0	8406
1/79	10026	0	0	0	26	0	0	0	0	0	706	0	0	10758
	-22.5%	0.0%	0.0%	0.0%	-19.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-13.5%	0.0%	0.0%	-21.9%
2/80	10702	0	0	0	20	0	0	0	0	0	0	0	0	10722
2/79	11475	0	0	0	23	0	0	0	0	0	754	0	0	12252
	-6.7%	0.0%	0.0%	0.0%	-13.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-12.5%
3/80	8517	0	0	0	18	0	0	0	0	0	0	0	0	8535
3/79	7040	0	0	0	15	0	0	0	0	0	616	0	0	7671
	21.0%	0.0%	0.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	11.3%
4/80	5860	0	0	0	10	0	0	0	0	0	0	0	0	5870
4/79	5502	0	0	0	11	0	0	0	0	0	475	0	0	5988
	6.5%	0.0%	0.0%	0.0%	-9.1%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-2.0%
5/80	3050	0	0	0	5	0	0	0	0	0	0	0	0	3055
5/79	3091	0	0	0	6	0	0	0	0	0	281	0	0	3378
	-1.3%	0.0%	0.0%	0.0%	-16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-9.6%
6/80	2216	0	0	0	3	0	0	0	0	0	0	0	0	2219
6/79	2789	0	0	0	3	0	0	0	0	0	191	0	0	2983
	-20.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-25.6%
7/80	1895	0	0	0	3	0	0	0	0	0	0	0	0	1898
7/79	2164	0	0	0	3	0	0	0	0	0	147	0	0	2314
	-12.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-18.0%
8/80	1893	0	0	0	3	0	0	0	0	0	0	0	0	1896
8/79	2185	0	0	0	3	0	0	0	0	0	155	0	0	2343
	-13.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-19.1%
SUMMER TOTAL														
	20831	0	0	0	35	0	0	0	0	0	140	0	0	21006
	21629	0	0	0	38	0	0	0	0	0	1688	0	0	23355
	-3.7%	0.0%	0.0%	0.0%	-7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	-91.7%	0.0%	0.0%	-10.1%
WINTER TOTAL														
	39726	0	0	0	90	0	0	0	0	0	1539	0	0	41355
	39958	0	0	0	96	0	0	0	0	0	2768	0	1058	43880
	-0.6%	0.0%	0.0%	0.0%	-6.3%	0.0%	0.0%	0.0%	0.0%	0.0%	-44.4%	0.0%	-100.0%	-5.8%
YEAR TOTAL														
	60557	0	0	0	125	0	0	0	0	0	1679	0	0	62361
	61587	0	0	0	134	0	0	0	0	0	4456	0	1058	67235
	-1.7%	0.0%	0.0%	0.0%	-6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	-62.3%	0.0%	-100.0%	-7.2%

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(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-4. Comparison Between Two Years of Actual Gas Supply for
East Ohio Gas Company
(MMCF)

MO/YR	COLUMBIA GAS	CONSOLIDATED GAS	LAWRENCEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/PROPANE	OTHER	TOTAL SUPPLIES
9/79	0	14480	0	0	5361	0	0	0	0	5114	0	148	0	25103
9/78	0	14128	0	0	5252	0	0	0	0	4701	0	115	0	24196
	0.0%	2.5%	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	8.8%	0.0%	28.7%	0.0%	3.7%
10/79	0	23522	0	0	5655	0	0	0	0	4390	0	191	0	33758
10/78	0	23205	0	0	5454	0	0	0	0	4144	0	120	0	32923
	0.0%	1.4%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	59.2%	0.0%	2.5%
11/79	0	16191	0	0	5395	0	0	0	0	4805	0	7955	0	34346
11/78	0	19400	0	0	4998	0	0	0	0	4600	0	6029	0	35027
	0.0%	-16.5%	0.0%	0.0%	7.9%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	31.9%	0.0%	-1.9%
12/79	0	15523	0	0	5603	0	0	0	0	4920	0	18419	0	44465
12/78	0	19100	0	0	5237	0	0	0	0	4718	0	19557	0	48612
	0.0%	-18.7%	0.0%	0.0%	7.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	-5.8%	0.0%	-8.5%
1/80	0	27304	0	0	5577	0	0	0	0	4950	0	15021	0	52852
1/79	0	36496	0	0	5047	0	0	0	0	4220	0	15664	0	61427
	0.0%	-25.2%	0.0%	0.0%	10.5%	0.0%	0.0%	0.0%	0.0%	17.3%	0.0%	-4.1%	0.0%	-14.0%
2/80	0	30233	0	0	5367	0	0	0	0	3253	0	10437	0	49290
2/79	0	37101	0	0	4742	0	0	0	0	4358	0	12435	0	58636
	0.0%	-18.5%	0.0%	0.0%	13.2%	0.0%	0.0%	0.0%	0.0%	-25.4%	0.0%	-16.1%	0.0%	-15.9%
3/80	0	23793	0	0	5722	0	0	0	0	4321	0	9082	0	42918
3/79	0	22381	0	0	5399	0	0	0	0	3703	0	7926	0	39409
	0.0%	6.3%	0.0%	0.0%	6.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	14.6%	0.0%	8.9%
4/80	0	25845	0	0	5477	0	0	0	0	4410	0	380	0	36112
4/79	0	28498	0	0	5358	0	0	0	0	4288	0	994	0	39138
	0.0%	-9.3%	0.0%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	-61.8%	0.0%	-7.7%
5/80	0	16000	0	0	5589	0	0	0	0	4503	0	281	0	26373
5/79	0	21405	0	0	5591	0	0	0	0	4250	0	255	0	31501
	0.0%	-25.3%	0.0%	0.0%	-0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	0.0%	10.2%	0.0%	-16.3%
6/80	0	12569	0	0	5362	0	0	0	0	4270	0	140	0	22341
6/79	0	16314	0	0	5384	0	0	0	0	4743	0	148	0	26589
	0.0%	-23.0%	0.0%	0.0%	-0.4%	0.0%	0.0%	0.0%	0.0%	-10.0%	0.0%	-5.4%	0.0%	-16.0%
7/80	0	9290	0	0	5725	0	0	0	0	4830	0	153	0	19998
7/79	0	14833	0	0	5519	0	0	0	0	4287	0	150	0	24789
	0.0%	-37.4%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	12.7%	0.0%	2.0%	0.0%	-19.3%
8/80	0	9737	0	0	5715	0	0	0	0	4275	0	151	0	19878
8/79	0	14588	0	0	5565	0	0	0	0	4514	0	143	0	24810
	0.0%	-33.3%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	-5.3%	0.0%	5.6%	0.0%	-19.9%
SUMMER TOTAL														
	0	111443	0	0	38884	0	0	0	0	31792	0	1444	0	183563
	0	132971	0	0	38123	0	0	0	0	30927	0	1925	0	203946
	0.0%	-16.2%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	-25.0%	0.0%	-10.0%
WINTER TOTAL														
	0	113044	0	0	27664	0	0	0	0	22249	0	60914	0	223871
	0	134478	0	0	25423	0	0	0	0	21599	0	61611	0	243111
	0.0%	-15.9%	0.0%	0.0%	8.8%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	-1.1%	0.0%	-7.9%
YEAR TOTAL														
	0	224487	0	0	66548	0	0	0	0	54041	0	62358	0	407434
	0	267449	0	0	63546	0	0	0	0	52526	0	63536	0	447057
	0.0%	-16.1%	0.0%	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	-1.9%	0.0%	-8.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-5. Comparison Between Two Years of Actual Gas Supply for National Gas and Oil Company (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
9/79	0	0	0	0	0	110	595	0	0	507	0	1	-49	1164
9/78	0	0	0	0	0	139	426	0	0	489	0	1	-19	1036
	0.0%	0.0%	0.0%	0.0%	0.0%	-20.9%	39.7%	0.0%	0.0%	3.7%	0.0%	0.0%	-157.9%	12.4%
10/79	0	0	0	0	0	129	642	0	0	531	0	24	-102	1224
10/78	0	0	0	0	0	152	561	0	0	513	0	24	-150	1100
	0.0%	0.0%	0.0%	0.0%	0.0%	-15.1%	14.4%	0.0%	0.0%	3.5%	0.0%	0.0%	32.0%	11.3%
11/79	0	0	0	0	0	153	534	0	0	533	0	131	-67	1284
11/78	0	0	0	0	0	123	550	0	0	525	0	48	-62	1184
	0.0%	0.0%	0.0%	0.0%	0.0%	24.4%	-2.9%	0.0%	0.0%	1.5%	0.0%	172.9%	-8.1%	8.4%
12/79	0	0	0	0	0	142	621	0	0	522	0	216	-87	1414
12/78	0	0	0	0	0	136	521	0	0	436	0	78	-100	1071
	0.0%	0.0%	0.0%	0.0%	0.0%	4.4%	19.2%	0.0%	0.0%	19.7%	0.0%	176.9%	13.0%	32.0%
1/80	0	0	0	0	0	157	686	0	0	467	0	217	9	1536
1/79	0	0	0	0	0	139	605	0	0	404	0	315	-113	1350
	0.0%	0.0%	0.0%	0.0%	0.0%	12.9%	13.4%	0.0%	0.0%	15.6%	0.0%	-31.1%	108.0%	13.8%
2/80	0	0	0	0	0	130	647	0	0	492	0	352	2	1623
2/79	0	0	0	0	0	121	465	0	0	368	0	385	6	1345
	0.0%	0.0%	0.0%	0.0%	0.0%	7.4%	39.1%	0.0%	0.0%	33.7%	0.0%	-8.6%	-66.7%	20.7%
3/80	0	0	0	0	0	133	640	0	0	466	0	268	96	1603
3/79	0	0	0	0	0	128	525	0	0	380	0	111	114	1258
	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%	21.9%	0.0%	0.0%	22.6%	0.0%	141.4%	-15.8%	27.4%
4/80	0	0	0	0	0	148	546	0	0	532	0	51	4	1281
4/79	0	0	0	0	0	125	586	0	0	424	0	51	-49	1137
	0.0%	0.0%	0.0%	0.0%	0.0%	18.4%	-6.8%	0.0%	0.0%	25.5%	0.0%	0.0%	108.2%	12.7%
5/80	0	0	0	0	0	139	566	0	0	478	0	5	7	1195
5/79	0	0	0	0	0	123	609	0	0	379	0	16	-62	1065
	0.0%	0.0%	0.0%	0.0%	0.0%	13.0%	-7.1%	0.0%	0.0%	26.1%	0.0%	-68.8%	111.3%	12.2%
6/80	0	0	0	0	0	149	546	0	0	513	0	2	-98	1112
6/79	0	0	0	0	0	116	542	0	0	387	0	5	-20	1030
	0.0%	0.0%	0.0%	0.0%	0.0%	28.4%	0.7%	0.0%	0.0%	32.6%	0.0%	-60.0%	-390.0%	8.0%
7/80	0	0	0	0	0	153	606	0	0	473	0	0	-58	1174
7/79	0	0	0	0	0	112	572	0	0	417	0	9	-21	1089
	0.0%	0.0%	0.0%	0.0%	0.0%	36.6%	5.9%	0.0%	0.0%	13.4%	0.0%	-100.0%	-176.2%	7.8%
8/80	0	0	0	0	0	153	469	0	0	519	0	2	-32	1111
8/79	0	0	0	0	0	125	654	0	0	473	0	4	-16	1240
	0.0%	0.0%	0.0%	0.0%	0.0%	22.4%	-28.3%	0.0%	0.0%	9.7%	0.0%	-50.0%	-100.0%	-10.4%
SUMMER TOTAL														
	0	0	0	0	0	981	3970	0	0	3553	0	85	-328	8261
	0	0	0	0	0	892	3950	0	0	3082	0	110	-337	7697
	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.5%	0.0%	0.0%	15.3%	0.0%	-22.7%	2.7%	7.3%
WINTER TOTAL														
	0	0	0	0	0	715	3128	0	0	2480	0	1184	-47	7460
	0	0	0	0	0	647	2666	0	0	2113	0	937	-155	6208
	0.0%	0.0%	0.0%	0.0%	0.0%	10.5%	17.3%	0.0%	0.0%	17.4%	0.0%	26.4%	69.7%	20.2%
YEAR TOTAL														
	0	0	0	0	0	1696	7098	0	0	6033	0	1269	-375	15721
	0	0	0	0	0	1539	6616	0	0	5195	0	1047	-492	13905
	0.0%	0.0%	0.0%	0.0%	0.0%	10.2%	7.3%	0.0%	0.0%	16.1%	0.0%	21.2%	23.8%	13.1%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-6. Comparison Between Two Years of Actual Gas Supply for Ohio Gas Company (MMCF)

MO/YR	COLUMBIA GAS	CONSOLIDATED GAS	LAWRENCEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
9/79	0	0	0	0	227	0	0	0	0	72	0	0	0	299
9/78	0	0	0	0	243	0	0	0	0	5	0	0	4	252
	0.0%	0.0%	0.0%	0.0%	-6.6%	0.0%	0.0%	0.0%	0.0%	1340.0%	0.0%	0.0%	-100.0%	18.7%
10/79	0	0	0	0	463	0	0	0	0	70	0	0	4	537
10/78	0	0	0	0	497	0	0	0	39	6	0	0	1	543
	0.0%	0.0%	0.0%	0.0%	-6.8%	0.0%	0.0%	0.0%	-100.0%	1066.7%	0.0%	0.0%	300.0%	-1.1%
11/79	0	0	0	0	666	0	0	0	0	97	0	0	16	779
11/78	0	0	0	0	661	0	0	0	0	36	0	0	1	698
	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	169.4%	0.0%	0.0%	1500.0%	11.6%
12/79	0	0	0	0	809	0	0	0	0	68	0	0	24	901
12/78	0	0	0	0	905	0	0	0	0	37	0	0	37	979
	0.0%	0.0%	0.0%	0.0%	-10.6%	0.0%	0.0%	0.0%	0.0%	83.8%	0.0%	0.0%	-35.1%	-8.0%
1/80	0	0	0	0	1014	0	0	0	0	62	0	0	20	1096
1/79	0	0	0	0	1096	0	0	0	0	34	0	68	32	1230
	0.0%	0.0%	0.0%	0.0%	-7.5%	0.0%	0.0%	0.0%	0.0%	82.4%	0.0%	-100.0%	-37.5%	-10.9%
2/80	0	0	0	0	967	0	0	0	0	63	0	0	20	1050
2/79	0	0	0	0	942	0	0	0	0	42	0	109	37	1130
	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	-100.0%	-45.9%	-7.1%
3/80	0	0	0	0	816	0	0	0	0	68	0	0	20	904
3/79	0	0	0	0	915	0	0	0	0	22	0	0	31	968
	0.0%	0.0%	0.0%	0.0%	-10.8%	0.0%	0.0%	0.0%	0.0%	209.1%	0.0%	0.0%	-35.5%	-6.6%
4/80	0	0	0	0	439	0	0	0	0	64	0	0	20	523
4/79	0	0	0	0	570	0	0	0	0	21	0	2	20	613
	0.0%	0.0%	0.0%	0.0%	-23.0%	0.0%	0.0%	0.0%	0.0%	204.8%	0.0%	-100.0%	0.0%	-14.7%
5/80	0	0	0	0	224	0	0	0	0	53	0	0	20	297
5/79	0	0	0	0	344	0	0	0	0	40	0	0	3	387
	0.0%	0.0%	0.0%	0.0%	-34.9%	0.0%	0.0%	0.0%	0.0%	32.5%	0.0%	0.0%	566.7%	-23.3%
6/80	0	0	0	0	202	0	0	0	0	50	0	0	15	267
6/79	0	0	0	0	221	0	0	0	0	66	0	0	5	292
	0.0%	0.0%	0.0%	0.0%	-8.6%	0.0%	0.0%	0.0%	0.0%	-24.2%	0.0%	0.0%	200.0%	-8.6%
7/80	0	0	0	0	153	0	0	0	0	59	0	0	15	227
7/79	0	0	0	0	196	0	0	0	0	69	0	0	5	270
	0.0%	0.0%	0.0%	0.0%	-21.9%	0.0%	0.0%	0.0%	0.0%	-14.5%	0.0%	0.0%	200.0%	-15.9%
8/80	0	0	0	0	154	0	0	0	0	66	0	0	10	230
8/79	0	0	0	0	185	0	0	0	0	84	0	0	5	274
	0.0%	0.0%	0.0%	0.0%	-16.8%	0.0%	0.0%	0.0%	0.0%	-21.4%	0.0%	0.0%	100.0%	-16.1%
SUMMER TOTAL	0	0	0	0	1862	0	0	0	0	434	0	0	84	2380
	0	0	0	0	2256	0	0	0	39	291	0	2	43	2631
	0.0%	0.0%	0.0%	0.0%	-17.5%	0.0%	0.0%	0.0%	-100.0%	49.1%	0.0%	-100.0%	95.3%	-9.5%
WINTER TOTAL	0	0	0	0	4272	0	0	0	0	358	0	0	100	4730
	0	0	0	0	4519	0	0	0	0	171	0	177	138	5005
	0.0%	0.0%	0.0%	0.0%	-5.5%	0.0%	0.0%	0.0%	0.0%	109.4%	0.0%	-100.0%	-27.5%	-5.5%
YEAR TOTAL	0	0	0	0	6134	0	0	0	0	792	0	0	184	7110
	0	0	0	0	6775	0	0	0	39	462	0	179	181	7636
	0.0%	0.0%	0.0%	0.0%	-9.5%	0.0%	0.0%	0.0%	-100.0%	71.4%	0.0%	-100.0%	1.7%	-6.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-7. Comparison Between Two Years of Actual Gas Supply for
River Gas Company
(MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
9/79	0	74	0	0	0	0	0	0	0	152	0	0	0	226
9/78	0	61	0	0	0	0	0	0	0	104	0	0	0	165
	0.0%	21.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	46.2%	0.0%	0.0%	0.0%	37.0%
10/79	0	187	0	0	0	0	0	0	0	139	0	0	0	326
10/78	0	181	0	0	0	0	0	0	0	131	0	0	0	312
	0.0%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%	0.0%	0.0%	0.0%	4.5%
11/79	0	257	0	0	0	0	0	0	0	163	0	0	0	420
11/78	0	307	0	0	0	0	0	0	0	145	0	0	0	452
	0.0%	-16.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.4%	0.0%	0.0%	0.0%	-7.1%
12/79	0	372	0	0	0	0	0	0	0	196	0	0	0	568
12/78	0	504	0	0	0	0	0	0	0	169	0	0	0	673
	0.0%	-26.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	0.0%	0.0%	0.0%	-15.6%
1/80	0	468	0	0	0	0	0	0	0	159	0	0	0	627
1/79	0	768	0	0	0	0	0	0	0	120	0	0	0	888
	0.0%	-39.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32.5%	0.0%	0.0%	0.0%	-29.4%
2/80	0	559	0	0	0	0	0	0	0	154	0	0	0	713
2/79	0	697	0	0	0	0	0	0	0	111	0	0	0	808
	0.0%	-19.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38.7%	0.0%	0.0%	0.0%	-11.8%
3/80	0	415	0	0	0	0	0	0	0	146	0	0	0	561
3/79	0	369	0	0	0	0	0	0	0	119	0	0	0	488
	0.0%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	22.7%	0.0%	0.0%	0.0%	15.0%
4/80	0	195	0	0	0	0	0	0	0	180	0	0	0	375
4/79	0	227	0	0	0	0	0	0	0	175	0	0	0	402
	0.0%	-14.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	-6.7%
5/80	0	68	0	0	0	0	0	0	0	135	0	0	0	203
5/79	0	108	0	0	0	0	0	0	0	153	0	0	0	261
	0.0%	-37.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-11.8%	0.0%	0.0%	0.0%	-22.2%
6/80	0	19	0	0	0	0	0	0	0	134	0	0	0	153
6/79	0	57	0	0	0	0	0	0	0	172	0	0	0	229
	0.0%	-66.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-22.1%	0.0%	0.0%	0.0%	-33.2%
7/80	0	12	0	0	0	0	0	0	0	144	0	0	0	156
7/79	0	49	0	0	0	0	0	0	0	112	0	0	0	161
	0.0%	-75.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.6%	0.0%	0.0%	0.0%	-3.1%
8/80	0	26	0	0	0	0	0	0	0	121	0	0	0	147
8/79	0	51	0	0	0	0	0	0	0	116	0	0	0	167
	0.0%	-49.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	-12.0%
SUMMER TOTAL														
	0	581	0	0	0	0	0	0	0	1005	0	0	0	1586
	0	734	0	0	0	0	0	0	0	963	0	0	0	1697
	0.0%	-20.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.4%	0.0%	0.0%	0.0%	-6.5%
WINTER TOTAL														
	0	2071	0	0	0	0	0	0	0	818	0	0	0	2889
	0	2645	0	0	0	0	0	0	0	664	0	0	0	3309
	0.0%	-21.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.2%	0.0%	0.0%	0.0%	-12.7%
YEAR TOTAL														
	0	2652	0	0	0	0	0	0	0	1823	0	0	0	4475
	0	3379	0	0	0	0	0	0	0	1627	0	0	0	5006
	0.0%	-21.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.0%	0.0%	0.0%	0.0%	-10.6%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-8. Comparison Between Two Years of Actual Gas Supply for West Ohio Gas Company (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
9/79	504	0	0	33	0	0	0	0	0	0	34	0	0	571
9/78	439	0	0	57	0	0	0	0	0	0	48	0	0	544
	14.8%	0.0%	0.0%	-42.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-29.2%	0.0%	0.0%	5.0%
10/79	875	0	0	100	0	0	0	0	0	0	63	0	0	1038
10/78	1113	0	0	112	0	0	0	0	0	0	72	0	0	1297
	-21.4%	0.0%	0.0%	-10.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-12.5%	0.0%	0.0%	-20.0%
11/79	1309	0	0	136	0	0	0	0	0	0	90	0	0	1535
11/78	1051	0	0	126	0	0	0	0	0	0	104	200	0	1481
	24.5%	0.0%	0.0%	7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-13.5%	-100.0%	0.0%	3.6%
12/79	1562	0	0	159	0	0	0	0	0	0	120	0	0	1841
12/78	1711	0	0	171	0	0	0	0	0	0	139	0	0	2021
	-8.7%	0.0%	0.0%	-7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-13.7%	0.0%	0.0%	-8.9%
1/80	1941	0	0	190	0	0	0	0	0	0	129	0	0	2260
1/79	2316	0	0	202	0	0	0	0	0	0	150	0	0	2668
	-16.2%	0.0%	0.0%	-5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-14.0%	0.0%	0.0%	-15.3%
2/80	1895	0	0	191	0	0	0	0	0	0	111	0	0	2197
2/79	2163	0	0	184	0	0	0	0	0	0	125	0	0	2472
	-12.4%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-11.2%	0.0%	0.0%	-11.1%
3/80	1575	0	0	158	0	0	0	0	0	0	99	0	0	1832
3/79	1383	0	0	143	0	0	0	0	0	0	112	0	0	1638
	13.9%	0.0%	0.0%	10.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-11.6%	0.0%	0.0%	11.8%
4/80	967	0	0	95	0	0	0	0	0	0	77	0	0	1139
4/79	1099	0	0	26	0	0	0	0	0	0	77	0	0	1202
	-12.0%	0.0%	0.0%	265.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-5.2%
5/80	560	0	0	7	0	0	0	0	0	0	58	0	0	625
5/79	580	0	0	10	0	0	0	0	0	0	57	0	0	647
	-3.4%	0.0%	0.0%	-30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	-3.4%
6/80	385	0	0	5	0	0	0	0	0	0	40	0	0	430
6/79	503	0	0	7	0	0	0	0	0	0	40	0	0	550
	-23.5%	0.0%	0.0%	-28.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-21.8%
7/80	307	0	0	5	0	0	0	0	0	0	34	0	0	346
7/79	412	0	0	6	0	0	0	0	0	0	34	0	0	452
	-25.5%	0.0%	0.0%	-16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-23.5%
8/80	384	0	0	6	0	0	0	0	0	0	22	0	0	412
8/79	432	0	0	7	0	0	0	0	0	0	38	0	0	477
	-11.1%	0.0%	0.0%	-14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-42.1%	0.0%	0.0%	-13.6%
SUMMER TOTAL														
	3982	0	0	251	0	0	0	0	0	0	328	0	0	4561
	4578	0	0	225	0	0	0	0	0	0	366	0	0	5169
	-13.0%	0.0%	0.0%	11.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-10.4%	0.0%	0.0%	-11.8%
WINTER TOTAL														
	8282	0	0	834	0	0	0	0	0	0	549	0	0	9665
	8624	0	0	826	0	0	0	0	0	0	630	200	0	10280
	-4.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-12.9%	-100.0%	0.0%	-6.0%
YEAR TOTAL														
	12264	0	0	1085	0	0	0	0	0	0	877	0	0	14226
	13202	0	0	1051	0	0	0	0	0	0	996	200	0	15449
	-7.1%	0.0%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-11.9%	-100.0%	0.0%	-7.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-9. Comparison Between 1979-80 Actual and 1980-81 Forecast Gas Demand by Sector for Cincinnati Gas and Electric Company (MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
9/80	44	768	668	3094	175	0	4705	4701
9/79	60	843	526	1777	153	0	3299	0
	-26.7%	-8.9%	27.0%	74.1%	14.4%	0.0%	42.6%	999.9%
10/80	271	1449	987	3268	1463	0	7167	0
10/79	346	1516	876	2175	1783	0	6350	0
	-21.7%	-4.4%	12.7%	50.3%	-17.9%	0.0%	12.9%	0.0%
11/80	636	2913	1830	3464	2233	0	10440	0
11/79	616	3095	1749	2489	1590	0	8923	0
	3.2%	-5.9%	4.6%	39.2%	40.4%	0.0%	17.0%	0.0%
12/80	970	5550	3327	3908	1500	0	14285	0
12/79	887	4845	2764	2992	1067	0	11668	0
	9.4%	14.6%	20.4%	30.6%	40.6%	0.0%	22.4%	0.0%
1/81	1051	7448	2833	4095	822	0	15198	0
1/80	1080	6008	3374	3098	1062	0	13542	0
	-2.7%	24.0%	-16.0%	32.2%	-22.6%	0.0%	12.2%	0.0%
2/81	888	7019	2713	3959	-374	0	13317	0
2/80	1182	6667	3669	3249	96	0	13681	0
	-24.9%	5.3%	-26.1%	21.9%	-489.6%	0.0%	-2.7%	0.0%
3/81	722	6617	2474	3864	-761	0	12194	0
3/80	814	6051	3333	2956	-1239	0	11101	0
	-11.3%	9.4%	-25.8%	30.7%	38.6%	0.0%	9.8%	0.0%
4/81	341	4243	1718	3801	-1186	0	8576	0
4/80	434	3776	2140	2266	-1580	0	6602	0
	-21.4%	12.4%	-19.7%	67.7%	24.9%	0.0%	29.9%	0.0%
5/81	138	2438	960	3521	-463	0	6456	0
5/80	92	1946	1155	1466	-1226	0	3341	0
	50.0%	25.3%	-16.9%	140.2%	62.2%	0.0%	93.2%	0.0%
6/81	9	1499	647	3321	-332	0	5135	0
6/80	24	995	612	1273	-103	0	2777	0
	-62.5%	50.7%	5.7%	160.9%	-222.3%	0.0%	84.9%	0.0%
7/81	0	823	558	2418	164	0	3963	0
7/80	0	798	491	1302	168	0	2759	0
	0.0%	3.1%	13.6%	85.7%	-2.4%	0.0%	43.6%	0.0%
8/81	0	822	559	2444	164	0	3989	0
8/80	0	748	490	1827	133	0	3198	0
	0.0%	9.9%	14.1%	33.8%	23.3%	0.0%	24.7%	0.0%
SUMMER TOTAL								
	803	12042	6097	21867	-15	0	39991	4701
	956	10622	6290	12086	-672	0	28326	0
	-16.0%	13.4%	-3.1%	80.9%	97.8%	0.0%	41.2%	999.9%
WINTER TOTAL								
	4267	29547	13177	19290	3420	0	65434	0
	4579	26666	14889	14784	2576	0	58915	0
	-6.8%	10.8%	-11.5%	30.5%	32.8%	0.0%	11.1%	0.0%
YEAR TOTAL								
	5070	41589	19274	41157	3405	0	105425	4701
	5535	37288	21179	26870	1904	0	87241	0
	-8.4%	11.5%	-9.0%	53.2%	78.8%	0.0%	20.8%	999.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-10. Comparison Between 1979-80 Actual and 1980-81 Forecast Gas Demand by Sector for Columbia Gas of Ohio
(MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
9/80	38	3220	1626	11800	1621	649	18916	0
9/79	59	3432	1518	10597	535	0	16082	0
	-35.6%	-6.2%	7.1%	11.4%	203.0%	999.9%	17.6%	0.0%
10/80	197	5919	2583	12100	4203	238	25043	0
10/79	274	7049	2744	10381	4170	0	24344	0
	-28.1%	-16.0%	-5.9%	16.6%	0.8%	999.9%	2.9%	0.0%
11/80	570	12165	5258	14190	4375	0	35988	0
11/79	577	12167	4970	12412	3326	0	32875	0
	-1.2%	-0.0%	5.8%	14.3%	31.5%	0.0%	9.5%	0.0%
12/80	951	19112	8096	13741	5420	0	46369	0
12/79	838	17498	7128	12362	4402	0	41390	0
	13.5%	9.2%	13.6%	11.2%	23.1%	0.0%	12.0%	0.0%
1/81	1173	23511	9972	15623	5490	0	54596	0
1/80	1078	22384	9132	14118	3669	0	49303	0
	8.8%	5.0%	9.2%	10.7%	49.6%	0.0%	10.7%	0.0%
2/81	1102	22796	9704	15276	-2858	0	44918	0
2/80	1232	24994	10230	14406	-388	0	49242	0
	-10.6%	-8.8%	-5.1%	6.0%	-636.6%	0.0%	-8.8%	0.0%
3/81	918	19931	8370	14143	-3172	0	39272	0
3/80	1040	21292	8834	14226	-2046	0	42306	0
	-11.7%	-6.4%	-5.3%	-0.6%	-55.0%	0.0%	-7.2%	0.0%
4/81	560	13357	5586	12853	-3154	45	28687	0
4/80	604	14080	5875	12094	-4299	0	27750	0
	-7.3%	-5.1%	-4.9%	6.3%	26.6%	999.9%	3.4%	0.0%
5/81	288	7987	3344	12211	-1970	0	21572	0
5/80	254	7175	3011	10154	-2827	0	17513	0
	13.4%	11.3%	11.1%	20.3%	30.3%	0.0%	23.2%	0.0%
6/81	85	4294	1888	11650	-1107	0	16725	0
6/80	83	4219	1712	8790	-751	0	13970	0
	2.4%	1.8%	10.3%	32.5%	-47.4%	0.0%	19.7%	0.0%
7/81	0	3173	1531	9280	-451	0	13533	0
7/80	0	3419	1483	8368	-506	0	12764	0
	0.0%	-7.2%	3.2%	10.9%	10.9%	0.0%	6.0%	0.0%
8/81	0	3172	1529	10263	534	0	15498	0
8/80	0	2901	1438	9180	254	0	13773	0
	0.0%	9.3%	6.3%	11.8%	110.2%	0.0%	12.5%	0.0%
SUMMER TOTAL								
	1168	41122	18087	80157	-324	932	139974	0
	1274	42275	17781	69564	-3424	0	126196	0
	-8.3%	-2.7%	1.7%	15.2%	90.5%	999.9%	10.9%	0.0%
WINTER TOTAL								
	4714	97515	41400	72973	9255	0	221143	0
	4765	98335	40294	67524	8963	0	215116	0
	-1.1%	-0.8%	2.7%	8.1%	3.3%	0.0%	2.8%	0.0%
YEAR TOTAL								
	5882	138637	59487	153130	8931	932	361117	0
	6039	140610	58075	137088	5539	0	341312	0
	-2.6%	-1.4%	2.4%	11.7%	61.2%	999.9%	5.8%	0.0%

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(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-11. Comparison Between 1979-80 Actual and 1980-81 Forecast Gas Demand by Sector for Dayton Power and Light Company (MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
9/80	29	774	261	1130	308	0	2473	0
9/79	56	753	252	1011	338	53	2407	0
	-48.2%	2.8%	3.6%	11.8%	-8.9%	-100.0%	2.7%	0.0%
10/80	188	1499	396	1256	637	0	3788	0
10/79	259	1387	424	1163	687	0	3661	0
	-27.4%	8.1%	-6.6%	8.0%	-7.3%	0.0%	3.5%	0.0%
11/80	509	2966	1091	1754	388	0	6199	0
11/79	534	2775	1098	1705	454	0	6032	0
	-4.7%	6.9%	-0.6%	2.9%	-14.5%	0.0%	2.8%	0.0%
12/80	867	4573	1593	1990	500	0	8656	0
12/79	754	4028	1467	1647	518	0	7660	0
	15.0%	13.5%	8.6%	20.8%	-3.5%	0.0%	13.0%	0.0%
1/81	1104	5675	1985	2006	95	0	9761	0
1/80	986	4965	1746	1780	-85	0	8406	0
	12.0%	14.3%	13.7%	12.7%	211.8%	0.0%	16.1%	0.0%
2/81	1108	5662	2048	2112	201	0	10023	0
2/80	1230	5822	2046	2084	770	0	10722	0
	-9.9%	-2.7%	0.1%	1.3%	-73.9%	0.0%	-6.5%	0.0%
3/81	878	4592	1741	1884	-331	0	7886	0
3/80	1062	5126	1801	1882	-274	0	8535	0
	-17.3%	-10.4%	-3.3%	0.1%	-20.8%	0.0%	-7.6%	0.0%
4/81	616	3430	1124	1512	-230	0	5836	0
4/80	652	3468	1258	1285	-141	0	5870	0
	-5.5%	-1.1%	-10.7%	17.7%	-63.1%	0.0%	-0.6%	0.0%
5/81	288	1895	690	1230	-288	0	3527	0
5/80	324	1939	712	970	-566	0	3055	0
	-11.1%	-2.3%	-3.1%	26.8%	49.1%	0.0%	15.5%	0.0%
6/81	78	971	410	958	-147	0	2192	0
6/80	62	910	389	987	-67	0	2219	0
	25.8%	6.7%	5.4%	-2.9%	-119.4%	0.0%	-1.2%	0.0%
7/81	9	645	330	931	-49	0	1857	0
7/80	15	712	328	882	-24	0	1898	0
	-40.0%	-9.4%	0.6%	5.6%	-104.2%	0.0%	-2.2%	0.0%
8/81	1	644	312	929	36	0	1921	0
8/80	0	620	313	914	49	0	1896	0
	999.9%	3.9%	-0.3%	1.6%	-26.5%	0.0%	1.3%	0.0%
SUMMER TOTAL								
	1209	9858	3523	7946	267	0	21594	0
	1368	9789	3676	7212	276	53	21006	0
	-11.6%	0.7%	-4.2%	10.2%	-3.3%	-100.0%	2.8%	0.0%
WINTER TOTAL								
	4466	23468	8458	9746	853	0	42525	0
	4566	22716	8158	9098	1383	0	41355	0
	-2.2%	3.3%	3.7%	7.1%	-38.3%	0.0%	2.8%	0.0%
YEAR TOTAL								
	5675	33326	11981	17692	1120	0	64119	0
	5934	32505	11834	16310	1659	53	62361	0
	-4.4%	2.5%	1.2%	8.5%	-32.5%	-100.0%	2.8%	0.0%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

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(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-12. Comparison Between 1979-80 Actual and 1980-81 Forecast Gas Demand by Sector for East Ohio Gas Company (MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
9/80	50	4678	1872	9781	2193	8300	26824	-6670
9/79	57	3556	1674	9161	1906	8806	25103	0
	-12.3%	31.6%	11.8%	6.8%	15.1%	-5.7%	6.9%	999.9%
10/80	205	7776	3027	10719	5156	6816	33494	0
10/79	273	7557	3203	10528	5258	7212	33758	0
	-24.9%	2.9%	-5.5%	1.8%	-1.9%	-5.5%	-0.8%	0.0%
11/80	534	13683	5240	10999	6732	0	36654	0
11/79	569	13777	5708	10806	4042	13	34346	0
	-6.2%	-0.7%	-8.2%	1.8%	66.6%	-100.0%	6.7%	0.0%
12/80	946	22875	8692	12293	5293	0	49153	0
12/79	872	19747	7782	11355	5092	489	44465	0
	8.5%	15.8%	11.7%	8.3%	3.9%	-100.0%	10.5%	0.0%
1/81	1192	27978	10514	13209	950	1326	53977	0
1/80	1104	24612	9868	11822	6116	434	52852	0
	8.0%	13.7%	6.5%	11.7%	-84.5%	205.5%	2.1%	0.0%
2/81	1137	26258	9850	13473	-2113	1326	48824	0
2/80	1303	27723	10899	12414	-1746	0	49290	0
	-12.7%	-5.3%	-9.3%	8.5%	-21.0%	999.9%	-0.9%	0.0%
3/81	1010	23766	8960	11526	-2092	0	42160	0
3/80	1083	23638	9407	11848	-1984	9	42918	0
	-6.7%	0.5%	-4.8%	-2.7%	-5.4%	-100.0%	-1.8%	0.0%
4/81	671	16462	6263	10191	-4290	8077	36703	0
4/80	667	16096	6110	9814	-5068	9160	36112	0
	0.6%	2.3%	2.5%	3.8%	15.4%	-11.8%	1.6%	0.0%
5/81	344	9706	3757	9706	-1782	10277	31664	0
5/80	352	9274	3329	7549	-4267	10488	26373	0
	-2.3%	4.7%	12.9%	28.6%	58.2%	-2.0%	20.1%	0.0%
6/81	121	5686	2264	8304	-974	9712	24992	0
6/80	134	5102	1822	6596	-554	9375	22341	0
	-9.7%	11.4%	24.3%	25.9%	-75.8%	3.6%	11.9%	0.0%
7/81	7	4088	1641	6958	476	9417	22580	0
7/80	33	3946	1597	5524	263	8668	19998	0
	-78.8%	3.6%	2.8%	26.0%	81.0%	8.6%	12.9%	0.0%
8/81	12	3824	1542	7975	873	8712	22926	0
8/80	3	3662	1516	5718	429	8553	19878	0
	300.0%	4.4%	1.7%	39.5%	103.5%	1.9%	15.3%	0.0%
SUMMER TOTAL	1410	52220	20366	63634	1652	61311	199183	-6670
	1519	49193	19251	54890	-2033	62262	183563	0
	-7.2%	6.2%	5.8%	15.9%	181.3%	-1.5%	8.5%	999.9%
WINTER TOTAL	4819	114560	43286	61500	8770	2652	230768	0
	4931	109497	43664	58245	11520	945	223871	0
	-2.3%	4.6%	-0.9%	5.6%	-23.9%	180.6%	3.1%	0.0%
YEAR TOTAL	6229	166780	63652	125134	10422	63963	429951	-6670
	6450	158690	62915	113135	9487	63207	407434	0
	-3.4%	5.1%	1.2%	10.6%	9.9%	1.2%	5.5%	999.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-13. Comparison Between 1979-80 Actual and 1980-81 Forecast Gas Demand by Sector for National Gas and Oil Company (MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
9/80	108	60	25	710	20	240	1055	-224
9/79	150	38	19	671	253	183	1164	0
	-28.0%	57.9%	31.6%	5.8%	-92.1%	31.1%	-9.4%	999.9%
10/80	393	80	50	710	15	230	1085	-161
10/79	0	72	32	731	296	93	1224	0
	999.9%	11.1%	56.3%	-2.9%	-94.9%	147.3%	-11.4%	999.9%
11/80	707	170	90	710	10	0	980	-300
11/79	742	157	78	747	277	25	1284	0
	-4.7%	8.3%	15.4%	-5.0%	-96.4%	-100.0%	-23.7%	999.9%
12/80	1060	252	122	690	10	0	1074	-220
12/79	1008	214	100	771	329	0	1414	0
	5.2%	17.8%	22.0%	-10.5%	-97.0%	0.0%	-24.0%	999.9%
1/81	1221	334	154	710	10	0	1208	-328
1/80	1171	265	120	783	368	0	1536	0
	4.3%	26.0%	28.3%	-9.3%	-97.3%	0.0%	-21.4%	999.9%
2/81	1029	340	155	710	330	0	1535	-95
2/80	1165	317	148	765	393	0	1623	0
	-11.7%	7.3%	4.7%	-7.2%	-16.0%	0.0%	-5.4%	999.9%
3/81	828	270	130	710	15	0	1125	-233
3/80	861	270	126	810	397	0	1603	0
	-3.8%	0.0%	3.2%	-12.3%	-96.2%	0.0%	-29.8%	999.9%
4/81	424	190	77	720	12	0	999	-231
4/80	473	180	84	666	340	11	1281	0
	-10.4%	5.6%	-8.3%	8.1%	-96.5%	-100.0%	-22.0%	999.9%
5/81	188	100	50	720	15	60	945	-265
5/80	166	103	46	632	320	94	1195	0
	13.3%	-2.9%	8.7%	13.9%	-95.3%	-36.2%	-20.9%	999.9%
6/81	0	50	30	700	18	190	988	-222
6/80	0	50	23	596	284	159	1112	0
	0.0%	0.0%	30.4%	17.4%	-93.7%	19.5%	-11.2%	999.9%
7/81	0	42	20	680	18	260	1020	-180
7/80	0	35	17	688	226	208	1174	0
	0.0%	20.0%	17.6%	-1.2%	-92.0%	25.0%	-13.1%	999.9%
8/81	0	40	20	720	18	280	1078	-107
8/80	0	38	18	683	164	208	1111	0
	0.0%	5.3%	11.1%	5.4%	-89.0%	34.6%	-3.0%	999.9%
SUMMER TOTAL								
	1113	562	272	4960	116	1260	7170	-1390
	789	516	239	4667	1883	956	8261	0
	41.1%	8.9%	13.8%	6.3%	-93.8%	31.8%	-13.2%	999.9%
WINTER TOTAL								
	4845	1366	651	3530	375	0	5922	-1176
	4947	1223	572	3876	1764	25	7460	0
	-2.1%	11.7%	13.8%	-8.9%	-78.7%	-100.0%	-20.6%	999.9%
YEAR TOTAL								
	5958	1928	923	8490	491	1260	13092	-2566
	5736	1739	811	8543	3647	981	15721	0
	3.9%	10.9%	13.8%	-0.6%	-86.5%	28.4%	-16.7%	999.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-14. Comparison Between 1979-80 Actual and 1980-81 Forecast Gas Demand by Sector for Ohio Gas Company (MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
9/80	101	97	41	170	14	0	322	-209
9/79	98	68	29	205	-4	0	298	-1
	3.1%	42.6%	41.4%	-17.1%	450.0%	0.0%	8.1%	*******%
10/80	379	202	87	306	27	0	622	-79
10/79	435	121	55	265	96	0	537	0
	-12.9%	66.9%	58.2%	15.5%	-71.9%	0.0%	15.8%	999.9%
11/80	734	335	138	272	34	0	779	-190
11/79	755	247	106	312	114	0	779	0
	-2.8%	35.6%	30.2%	-12.8%	-70.2%	0.0%	0.0%	999.9%
12/80	1126	489	201	322	47	0	1059	-796
12/79	990	355	163	281	103	0	902	1
	13.7%	37.7%	23.3%	14.6%	-54.4%	0.0%	17.4%	*******%
1/81	1316	523	235	320	41	0	1119	-736
1/80	1225	443	201	326	126	0	1096	0
	7.4%	18.1%	16.9%	-1.8%	-67.5%	0.0%	2.1%	999.9%
2/81	1098	459	199	282	35	0	975	-709
2/80	1219	489	225	299	37	0	1050	0
	-9.9%	-6.1%	-11.6%	-5.7%	-5.4%	0.0%	-7.1%	999.9%
3/81	878	385	167	262	31	0	845	-1010
3/80	957	458	191	283	-28	0	904	0
	-8.3%	-15.9%	-12.6%	-7.4%	210.7%	0.0%	-6.5%	999.9%
4/81	473	231	99	207	20	0	557	-725
4/80	494	324	124	173	-98	0	523	0
	-4.3%	-28.7%	-20.2%	19.7%	120.4%	0.0%	6.5%	999.9%
5/81	203	175	75	194	13	0	457	-583
5/80	135	167	51	139	-60	0	297	0
	50.4%	4.8%	47.1%	39.6%	121.7%	0.0%	53.9%	999.9%
6/81	31	96	40	212	10	0	358	-381
6/80	47	85	34	158	-10	0	267	0
	-34.0%	12.9%	17.6%	34.2%	200.0%	0.0%	34.1%	999.9%
7/81	4	63	28	185	10	0	286	-332
7/80	0	58	24	133	12	0	227	0
	999.9%	8.6%	16.7%	39.1%	-16.7%	0.0%	26.0%	999.9%
8/81	11	66	30	188	11	0	295	-373
8/80	1	55	24	136	15	0	230	0
	1000.0%	20.0%	25.0%	38.2%	-26.7%	0.0%	28.3%	999.9%
SUMMER TOTAL	1202	930	400	1462	105	0	2897	-2682
	1210	878	341	1209	-49	0	2379	-1
	-0.7%	5.9%	17.3%	20.9%	314.3%	0.0%	21.8%	*******%
WINTER TOTAL	5152	2191	940	1458	188	0	4777	-3441
	5146	1992	886	1501	352	0	4731	1
	0.1%	10.0%	6.1%	-2.9%	-46.6%	0.0%	1.0%	*******%
YEAR TOTAL	6354	3121	1340	2920	293	0	7674	-6123
	6356	2870	1227	2710	303	0	7110	0
	-0.0%	8.7%	9.2%	7.7%	-3.3%	0.0%	7.9%	999.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-15. Comparison Between 1979-80 Actual and 1980-81 Forecast Gas Demand by Sector for River Gas Company (MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
9/80	16	49	18	141	19	0	227	0
9/79	32	45	21	137	23	0	226	0
	-50.0%	8.9%	-14.3%	2.9%	-17.4%	0.0%	0.4%	0.0%
10/80	167	101	39	181	53	0	374	0
10/79	229	85	37	158	46	0	326	0
	-27.1%	18.8%	5.4%	14.6%	15.2%	0.0%	14.7%	0.0%
11/80	491	202	82	154	58	0	496	0
11/79	513	154	54	148	64	0	420	0
	-4.3%	31.2%	51.9%	4.1%	-9.4%	0.0%	18.1%	0.0%
12/80	817	306	125	162	70	0	663	0
12/79	0	238	89	122	119	0	568	0
	999.9%	28.6%	40.4%	32.8%	-41.2%	0.0%	16.7%	0.0%
1/81	993	367	147	235	26	0	775	0
1/80	892	352	128	140	7	0	627	0
	11.3%	4.3%	14.8%	67.9%	271.4%	0.0%	23.6%	0.0%
2/81	972	360	144	274	-25	0	753	0
2/80	1189	333	134	161	85	0	713	0
	-18.3%	8.1%	7.5%	70.2%	-129.4%	0.0%	5.6%	0.0%
3/81	711	272	106	168	10	0	556	0
3/80	840	373	135	153	-100	0	561	0
	-15.4%	-27.1%	-21.5%	9.8%	110.0%	0.0%	-0.9%	0.0%
4/81	446	187	73	133	-38	0	355	0
4/80	488	182	75	156	-38	0	375	0
	-8.6%	2.7%	-2.7%	-14.7%	0.0%	0.0%	-5.3%	0.0%
5/81	170	99	40	143	-8	0	274	0
5/80	210	125	41	102	-65	0	203	0
	-19.0%	-20.8%	-2.4%	40.2%	87.7%	0.0%	35.0%	0.0%
6/81	34	55	24	69	-2	0	146	0
6/80	40	49	17	79	8	0	153	0
	-15.0%	12.2%	41.2%	-12.7%	-125.0%	0.0%	-4.6%	0.0%
7/81	0	43	18	59	12	0	132	0
7/80	1	42	16	63	35	0	156	0
	-100.0%	2.4%	12.5%	-6.3%	-65.7%	0.0%	-15.4%	0.0%
8/81	0	41	18	64	12	0	135	0
8/80	0	38	14	79	16	0	147	0
	0.0%	7.9%	28.6%	-19.0%	-25.0%	0.0%	-8.2%	0.0%
SUMMER TOTAL								
	833	575	230	790	48	0	1643	0
	1000	566	221	774	25	0	1586	0
	-16.7%	1.6%	4.1%	2.1%	92.0%	0.0%	3.6%	0.0%
WINTER TOTAL								
	3984	1507	604	993	139	0	3243	0
	3434	1450	540	724	175	0	2889	0
	16.0%	3.9%	11.9%	37.2%	-20.6%	0.0%	12.3%	0.0%
YEAR TOTAL								
	4817	2082	834	1783	187	0	4886	0
	4434	2016	761	1498	200	0	4475	0
	8.6%	3.3%	9.6%	19.0%	-6.5%	0.0%	9.2%	0.0%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

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(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-16. Comparison Between 1979-80 Actual and 1980-81 Forecast Gas Demand by Sector for West Ohio Gas Company (MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
9/80	25	158	100	290	120	0	668	0
9/79	32	149	89	265	68	0	571	0
	-21.9%	6.0%	12.4%	9.4%	76.5%	0.0%	17.0%	0.0%
10/80	158	278	154	351	328	0	1111	0
10/79	179	262	170	270	336	0	1038	0
	-11.7%	6.1%	-9.4%	30.0%	-2.4%	0.0%	7.0%	0.0%
11/80	464	559	357	352	596	0	1864	0
11/79	497	572	377	278	308	0	1535	0
	-6.6%	-2.3%	-5.3%	26.6%	93.5%	0.0%	21.4%	0.0%
12/80	811	882	545	337	281	0	2045	0
12/79	718	938	522	293	88	0	1841	0
	13.0%	-6.0%	4.4%	15.0%	219.3%	0.0%	11.1%	0.0%
1/81	1137	1183	643	363	274	0	2463	0
1/80	1026	957	537	416	350	0	2260	0
	10.8%	23.6%	19.7%	-12.7%	-21.7%	0.0%	9.0%	0.0%
2/81	1175	1219	626	381	-66	0	2160	0
2/80	1258	1088	611	393	105	0	2197	0
	-6.6%	12.0%	2.5%	-3.1%	-162.9%	0.0%	-1.7%	0.0%
3/81	907	970	558	367	-137	0	1758	0
3/80	1087	1045	559	356	-128	0	1832	0
	-16.6%	-7.2%	-0.2%	3.1%	-7.0%	0.0%	-4.0%	0.0%
4/81	710	785	370	339	-265	0	1229	0
4/80	665	754	395	287	-297	0	1139	0
	6.8%	4.1%	-6.3%	18.1%	10.8%	0.0%	7.9%	0.0%
5/81	338	430	215	268	-244	0	669	0
5/80	357	399	191	213	-178	0	625	0
	-5.3%	7.8%	12.6%	25.8%	-37.1%	0.0%	7.0%	0.0%
6/81	114	232	121	271	-93	0	531	0
6/80	78	198	102	194	-64	0	430	0
	46.2%	17.2%	18.6%	39.7%	-45.3%	0.0%	23.5%	0.0%
7/81	15	147	93	201	-11	0	430	0
7/80	23	135	80	160	-29	0	346	0
	-34.8%	8.9%	16.3%	25.6%	62.1%	0.0%	24.3%	0.0%
8/81	5	136	88	241	82	0	547	0
8/80	0	119	79	175	39	0	412	0
	999.9%	14.3%	11.4%	37.7%	110.3%	0.0%	32.8%	0.0%
SUMMER TOTAL								
	1365	2166	1141	1961	-83	0	5185	0
	1334	2016	1106	1564	-125	0	4561	0
	2.3%	7.4%	3.2%	25.4%	33.6%	0.0%	13.7%	0.0%
WINTER TOTAL								
	4494	4813	2729	1800	948	0	10290	0
	4586	4600	2606	1736	723	0	9665	0
	-2.0%	4.6%	4.7%	3.7%	31.1%	0.0%	6.5%	0.0%
YEAR TOTAL								
	5859	6979	3870	3761	865	0	15475	0
	5920	6616	3712	3300	598	0	14226	0
	-1.0%	5.5%	4.3%	14.0%	44.6%	0.0%	8.8%	0.0%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-17. Projected Supply and Demand for Eight Major Ohio Natural Gas Utilities
(MMCF)

COMPANY: CINN. GAS & ELEC.

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/80	10/80	11/80	12/80	1/81	2/81	3/81	4/81	5/81	6/81	7/81	8/81	SUMMER	WINTER	YEAR
SUPPLY	4	7167	10440	14285	15198	13317	12194	8576	6456	5135	3963	3989	35290	65434	100724
DEMAND	4705	7167	10440	14285	15198	13317	12194	8576	6456	5135	3963	3989	39991	65434	105425
DEFICIENCY	4701	0	0	0	0	0	0	0	0	0	0	0	4701	0	4701
% DEFICIENCY	99.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.8%	0.0%	4.5%

COMPANY: COLUMBIA GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/80	10/80	11/80	12/80	1/81	2/81	3/81	4/81	5/81	6/81	7/81	8/81	SUMMER	WINTER	YEAR
SUPPLY	18916	25043	35988	46369	54596	44918	39272	28687	21572	16725	13533	15498	139974	221143	361117
DEMAND	18916	25043	35988	46369	54596	44918	39272	28687	21572	16725	13533	15498	139974	221143	361117
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: DAYTON POWER & LIGHT

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/80	10/80	11/80	12/80	1/81	2/81	3/81	4/81	5/81	6/81	7/81	8/81	SUMMER	WINTER	YEAR
SUPPLY	2473	3788	6199	8656	9761	10023	7886	5836	3527	2192	1857	1921	21594	42525	64119
DEMAND	2473	3788	6199	8656	9761	10023	7886	5836	3527	2192	1857	1921	21594	42525	64119
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: EAST OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/80	10/80	11/80	12/80	1/81	2/81	3/81	4/81	5/81	6/81	7/81	8/81	SUMMER	WINTER	YEAR
SUPPLY	33494	33494	36654	49153	53977	48824	42160	36703	31664	24992	22580	22926	205853	230768	436621
DEMAND	26824	33494	36654	49153	53977	48824	42160	36703	31664	24992	22580	22926	199183	230768	429951
DEFICIENCY	-6670	0	0	0	0	0	0	0	0	0	0	0	-6670	0	-6670
% DEFICIENCY	-24.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-3.3%	0.0%	-1.6%

Table B-17. Projected Supply and Demand for Eight Major Ohio Natural Gas Utilities (Cont'd)
(MMCF)

COMPANY: NATIONAL GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/80	10/80	11/80	12/80	1/81	2/81	3/81	4/81	5/81	6/81	7/81	8/81	SUMMER	WINTER	YEAR
SUPPLY	1279	1246	1280	1294	1536	1630	1358	1230	1210	1210	1200	1185	8560	7098	15658
DEMAND	1055	1085	980	1074	1208	1535	1125	999	945	988	1020	1078	7170	5922	13092
DEFICIENCY	-224	-161	-300	-220	-328	-95	-233	-231	-265	-222	-180	-107	-1390	-1176	-2566
% DEFICIENCY	-21.2%	-14.8%	-30.6%	-20.5%	-27.2%	-6.2%	-20.7%	-23.1%	-28.0%	-22.5%	-17.6%	-9.9%	-19.4%	-19.9%	-19.6%

COMPANY: OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/80	10/80	11/80	12/80	1/81	2/81	3/81	4/81	5/81	6/81	7/81	8/81	SUMMER	WINTER	YEAR
SUPPLY	531	701	969	1855	1855	1684	1855	1282	1040	739	618	668	5579	8218	13797
DEMAND	322	622	779	1059	1119	975	845	557	457	358	286	295	2897	4777	7674
DEFICIENCY	-209	-79	-190	-796	-736	-709	-1010	-725	-583	-381	-332	-373	-2682	-3441	-6123
% DEFICIENCY	-64.9%	-12.7%	-24.4%	-75.2%	-65.8%	-72.7%	-119.5%	-130.2%	-127.6%	-106.4%	-116.1%	-126.4%	-92.6%	-72.0%	-79.8%

COMPANY: RIVER GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/80	10/80	11/80	12/80	1/81	2/81	3/81	4/81	5/81	6/81	7/81	8/81	SUMMER	WINTER	YEAR
SUPPLY	227	374	496	663	775	753	556	355	274	146	132	135	1643	3243	4886
DEMAND	227	374	496	663	775	753	556	355	274	146	132	135	1643	3243	4886
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: WEST OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	9/80	10/80	11/80	12/80	1/81	2/81	3/81	4/81	5/81	6/81	7/81	8/81	SUMMER	WINTER	YEAR
SUPPLY	668	1111	1864	2045	2463	2160	1758	1229	669	531	430	547	5185	10290	15475
DEMAND	668	1111	1864	2045	2463	2160	1758	1229	669	531	430	547	5185	10290	15475
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

S6275-1 A

An Assessment of the Supplies of Natural Gas and Fuels for Generating Electricity in Ohio From July 1981 - June 1982

Presented to

Governor James A. Rhodes

Ohio Legislature

Public Utilities Commission of Ohio

August 17, 1981

Ohio Department of Energy

Robert C. Masoner, Director

BEST AVAILABLE COPY

James A. Rhodes
GOVERNOR

OHIO DEPARTMENT OF ENERGY
30 East Broad Street 34th Floor
Columbus, Ohio 43215
(614) 466-1805

Robert C. Masoner
DIRECTOR

August 17, 1981

The Honorable James A. Rhodes
Governor
Statehouse
Columbus, Ohio 43215

Dear Governor Rhodes:

Pursuant to ORC 4905:14, each public electric and gas utility in Ohio is required to file a report twice a year with the Ohio Department of Energy. This report is due on July 1 and November 1, and is to contain projections of the utility's total demand and fuel supply over the following twelve months. As required by the same statute, we sent to you on July 10, 1981, one copy of the utilities' reports.

The attached report is a summary and analysis of these reports as required by 4905:14. It includes an evaluation of the Ohio gas and electric situation for the coming winter and the next twelve months. It appears at this time that fuel supplies will be adequate. We will provide a further appraisal when the November reports are filed.

Sincerely,

Robert C. Masoner

Robert C. Masoner
Director

RCM/ot
Enclosure:

cc: James R. Tilling, Senate Clerk
Richard C. Murray, Clerk of the House
Jon F. Kelly, PUCO Chairman

An Assessment of the Supplies of Natural Gas
and Fuels for Generating Electricity in Ohio
from July 1981 - June 1982

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AN ASSESSMENT OF THE SUPPLIES OF NATURAL GAS

AND FUELS FOR GENERATING ELECTRICITY IN OHIO

SUMMARY

Section 4905 of the Ohio Revised Code requires than on July 1 and November 1 of each year Ohio's natural gas and electric utilities report forecasts of their projected fuel supply and demand for the ensuing twelve-month period. The statute further requires that the Ohio Department of Energy (ODOE) review each report and compare it to the Department's independently generated forecasts. This report represents ODOE's assessment of these individual forecasts and provides an aggregate forecast of Ohio's natural gas and electricity supply/demand outlook for the period July 1, 1981 through June 1, 1982.

Electricity

For the twelve month period ending in May 1981, consumption of electricity in Ohio was 0.1 percent lower than during the previous twelve month period. The decline is due to a 4.3 percent decrease in demand by the industrial sector. On the other hand, the residential sector and commercial sector demand increased by 4.2 and 4.4 percent respectively over the previous twelve month period. Ohio Department of Energy forecasts for the twelve month period ending June 1982 indicate that residential sector consumption will remain stable. Commercial sector consumption is forecast to increase by 2.6 percent; and industrial sector consumption is forecast to increase 1.5 percent.

The projected supply of coal and oil is adequate under normal circumstances.

Natural Gas

Following the passage of the Natural Gas Policy Act of 1978, new customer hookup bans were lifted from all Ohio utilities by the end of 1979. However, natural gas utilization levels in residential, commercial, and industrial sectors declined in 1980, relative to 1979. The only sector where natural gas utilization established a consistent upward trend from 1978 on is the electric utilities sector, which accounts for less than 1.1 percent of the total natural gas utilization in Ohio.

The experience of the past two years clearly indicates that declining levels of natural gas utilization in Ohio are no longer due to curtailments of customer base allocations to apportion inadequate supplies. The four-fold increase in the price of natural gas between 1972 and 1980, as indicated in Table 19, and the eight-fold increase in the price of imported crude oil during the same period of time, have expanded the share demanded by energy expenditures in the budget and balance sheets of U.S. households and industry. This increase has been of such magnitude that the maintenance of a minimal customary level of discretionary expenditures on nonenergy items had required consumers to make continuing reductions in absolute levels of energy consumption. In other words, energy consumers are simply being priced out of the market, or, at least, out of their more costly habits. This is exactly what theory suggests will happen as the price mechanism undertakes the process of allocating a scarce resource.

However, in actual practice, there is always a question of information and implementation costs, and a consequent problem of public welfare, involved under these circumstances. It is not clear that the

customers who are being forced to reduce their energy consumption levels will be able to do so through the adoption of the most efficient and effective measures that could be available and feasible for them. This is the case because the information, training, or costs involved may exceed consumers' capabilities. The provision of conservation services, information, or programs by a single public authority can, however, improve public welfare, and expedite greater conservation, at a net gain to consumers who would be the beneficiaries of such services.

As long as energy prices outstrip the growth in real per capita income, there is reason to believe that energy consumption in general, and natural gas consumption in particular, will not exhibit sustained upward trends similar to those observed in the sixties. Significant fluctuations in sectoral natural gas consumption levels may be expected in response to severe climatic conditions, or in response to fluctuations in the general unemployment levels in Ohio.

For 1982, we expect that industrial requirements will not significantly increase above their current levels.

Projected natural gas supplies for 1982 should be sufficient even in the case of a 10 percent colder than normal winter.

INTRODUCTION

This report has been prepared by the Ohio Department of Energy pursuant to Section 4905.14 (E) of the Ohio Revised Code. The statute requires the Department of Energy to provide a summary, analysis and recommendations based on the Ohio public utilities' energy supply and demand projections for the twelve-month period beginning July 1, 1981. In accordance with Section 4905.14 (D), a copy of each utility's November forecast was submitted to the Governor, Clerk of the Senate, the Legislative Clerk of the House of Representatives, and the Public Utilities Commission of Ohio on July 10, 1981. The utilities' forecasts and historical data are the primary input for this report. Several other sources of information have also been used, including historical energy data developed by the Ohio Department of Energy, federal energy reports, and publications from the American Gas Association and the Electric Power Research Institute. A substantial and successful effort has been undertaken to develop a comprehensive data base and at the same time maintain the ability to provide timely analyses and forecasts.

Objectives

In the preparation of this report, the Ohio Department of Energy set forth the following major objectives:

1. To provide an adequate historical, energy-related data profile for identification of current status and future trends;
2. To provide analysis and interpretation of changes in energy supply and demand;
3. To provide an independent assessment of the adequacy of natural gas and electric energy supply for the upcoming twelve months; and

4. If a potential deficiency between supply and demand is identified, to suggest a strategy for implementation in order to prevent or mitigate any interruption or curtailment of service.

The basis for the information to be evaluated is supplied in part by the reports filed with the Ohio Department of Energy, federal reports, and the research and analysis of the Ohio Department of Energy.

Temperature and Energy Consumption

Changes in the observed annual energy requirements of the three major consuming sectors may be explained by a variety of factors. Temperature is a variable which explains much of the observed variation. It is particularly significant in the residential and commercial sectors where, during summer and winter periods, the requirements for electricity and natural gas are used to maintain comfortable room temperatures.

Two indicators which measure temperature-sensitive energy requirements are heating degree days and cooling degree days. The daily mean temperature is obtained by adding together the maximum and minimum temperatures reported for the day and dividing the total by two. When the daily mean temperature is 65^{0} F, the degree day is zero. Each degree of mean temperature below 65^{0} F is counted as one heating degree day. This indicator is convenient because the amount of heat required to maintain a certain temperature level is proportional to heating degree days.

The cooling degree days are defined similarly: each degree of mean temperature above 65^{0} F is counted as one cooling degree day. If the daily mean temperature is 65^{0} F or lower, the cooling degree day total is zero.

Since most homes and commercial buildings in Ohio are heated by natural gas, the reporting gas utilities are required to submit supply and demand forecasts under a normal winter scenario and a ten percent colder than normal winter scenario. In addition, the relationship between natural gas consumption and heating degree days is closely monitored by ODOE during the winter heating season (from November through March). Table 1 and Figure 1 show, for the past two heating seasons, population-weighted state heating degree day summaries. In addition, a normal heating degree day series, defined as the 30 year average of the years 1941 to 1970, is presented.

Rules and Requirements for This Report

The administrative rules and forecasting requirements (OAC 1551:1-4 and 1551:1-5) became effective November 1, 1978. The present forecasting reports submitted by electric and gas utilities are in accordance with these rules.

It is necessary to differentiate between state energy consumption and production totals and the reporting utilities' totals. This is because the municipal utilities, industrial facilities and the rural electric cooperatives are not required to file the semi-annual report. This difference is actually very small (estimated to be about 6 percent for the electricity figures and 1.7 percent for natural gas (excluding self-help gas).

Ohio Department of Energy Forecasts

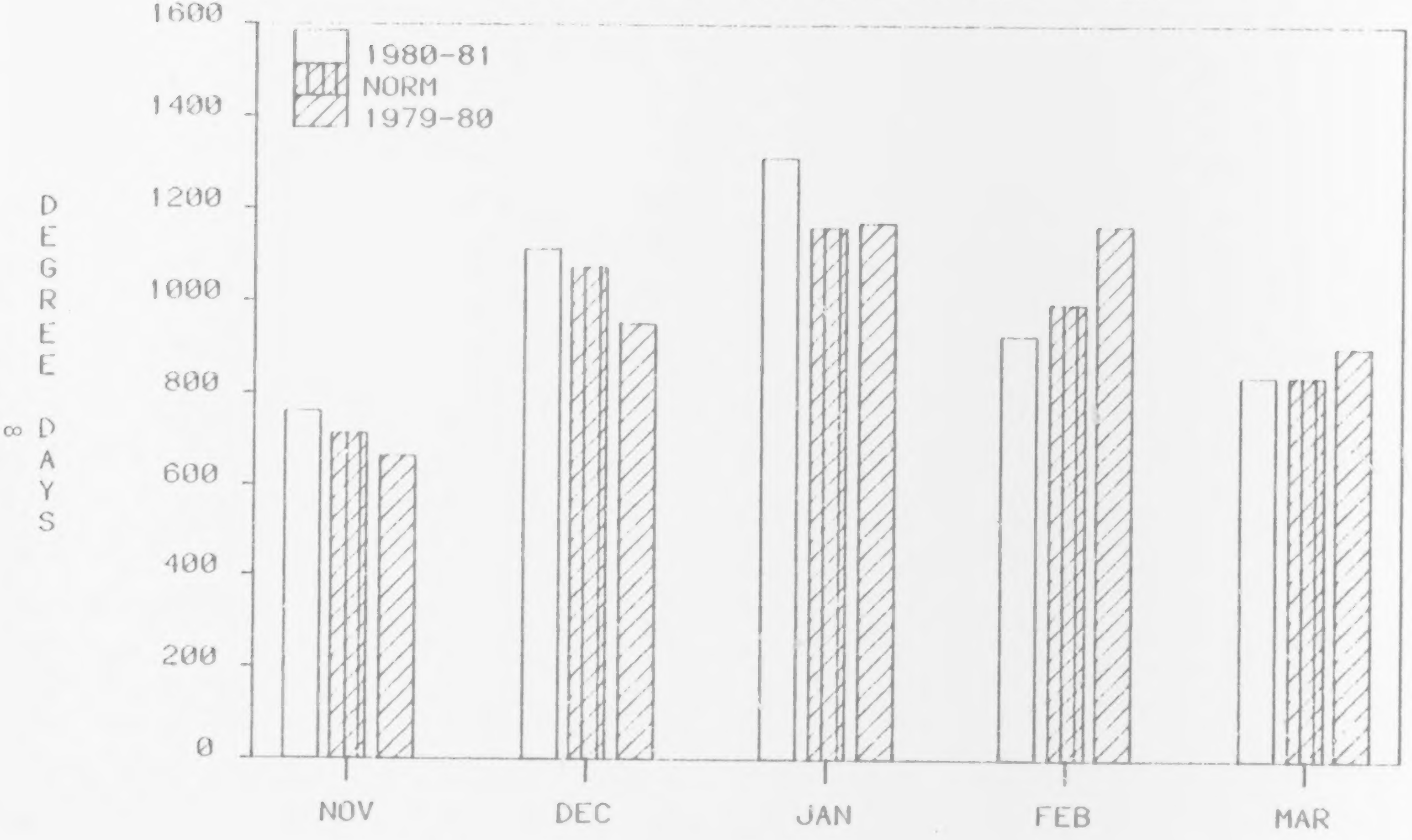
As part of its analysis, the Ohio Department of Energy makes independent forecasts to serve as validation checks. Early identification of severe conditions permits advanced planning to avert possible undesirable consequences.

Table 1. Population-Weighted State Degree-Day Summary for Ohio
November 1, 1980 to March 31, 1981

Week Ending Date	1980-81			Norm			1979-80		
	Weekly	Cum. for Month	Cum. from Nov. 1	Weekly	Cum. for Month	Cum. from Nov. 1	Weekly	Cum. for Month	Cum. from Nov. 1
Nov. 2	52	52	52	33	33	33	30	30	30
9	110	162	162	138	171	171	160	190	190
16	117	339	339	159	330	330	193	383	383
23	214	553	553	180	510	510	90	473	473
30	208	761	761	201	711	711	189	662	662
Deviation from Norm		7.0%	7.0%					-6.9%	-6.9%
Dec. 7	163	163	924	221	221	932	217	217	879
14	210	373	1134	237	458	1169	195	412	1074
21	296	669	1430	248	706	1417	238	650	1312
28	313	982	1743	256	962	1673	190	840	1502
31	127	1109	1870	111	1073	1784	109	949	1611
Deviation from Norm		3.4%	4.8%					-11.6%	-9.7%
Jan. 4	170	170	2040	149	149	1933	145	145	1756
11	384	554	2424	261	410	2194	266	411	2022
18	310	864	2734	263	673	2457	206	617	2228
25	232	1096	2966	261	934	2718	264	881	2492
31	216	1312	3182	224	1158	2942	290	1171	2782
Deviation from Norm		13.3%	8.2%					1.1%	-5.4%
Feb. 1	36	36	3218	37	37	2979	48	48	2830
8	324	360	3578	258	295	3274	336	384	3214
15	281	641	3859	254	549	3528	292	676	3506
22	128	769	3987	246	795	3774	246	922	3752
28	156	925	4143	201	996	3975	245	1167	4007
Deviation from Norm		-7.1%	4.2%					14.7%	0.8%
Mar. 1	26	26	4169	33	33	4008	41	41	4048
8	238	264	4407	218	251	4226	262	303	4310
15	190	454	4597	201	452	4427	227	530	4840
22	240	694	4837	183	635	4610	156	686	4996
29	129	823	4966	162	797	4772	174	860	5170
31	15	838	4981	40	837	4812	40	900	5210
Deviation from Norm		0.1%	3.5%					7.0%	7.6%

Source: National Weather Service, Port Columbus, and the Ohio Department of Energy.

FIGURE 1. POPULATION-WEIGHTED STATE DEGREE-DAYS FOR OHIO
WINTER HEATING SEASONS 1979 - 1981



SOURCE: OHIO DEPARTMENT OF ENERGY

The Ohio Department of Energy has the capability to forecast monthly demand by utility and for the state as a whole within a reasonable level of error (less than 5 percent in most cases). Such forecasts are based on historical month-by-month actual consumption for both electricity and natural gas and other appropriate variables such as population, income, and temperature data. As in any forecast, certain important socioeconomic conditions are assumed in the Ohio Department of Energy forecasts.

These assumptions are stated below:

1. Energy demand generally follows its historical consumption pattern.
2. Socio-economic changes are minimal in affecting demand for energy in the short run.
3. The observed level of conservation will remain in effect.
4. Other specific assumptions are stated where appropriate.

Overview of This Report

The rest of the report is divided into two parts: electric energy and natural gas. Materials contained in these two parts are, for the most part, parallel in arrangement. They contain: (a) a profile of reporting utilities; (b) historic sources of supplies/suppliers; (c) consumption history by sector, utility, and state; and (d) the utilities' forecasts and independent forecast by the Ohio Department of Energy. For the purpose of better illustration, the data are frequently displayed graphically.

ELECTRICITY

This section is based on the July forecasts filed by nine major Ohio electric utilities. For purposes of this report, and for the reasons described below, the nine utilities have been divided into five groups. These are:

1. Former CCD — Cincinnati Gas and Electric (CG&E)
   Columbus and Southern Ohio Electric (C&SOE)
   Dayton Power and Light (DP&L)
2. Former CAPCO — Cleveland Electric Illuminating (CEI)
   Ohio Edison (and its subsidiary Pennsylvania Power)
   Toledo Edison
   Duquesne Light (not subject to reporting)
3. American Electric Power Company (AEP)
   Ohio Power Company
   Other out-of-state utilities not subject to reporting
4. Allegheny Power System (APS)
   Monongahela Power
   Other out-of-state utilities not subject to reporting
5. Ohio Valley Electric Corporation (OVEC)

Although the CCD group no longer includes the Columbus and Southern Electric Company, acquired during the past year by the American Electric Power Corporation, the three utilities which formerly comprised the group own many power generation units in common. For this reason they are presented together under the old grouping. The same can be said of the CAPCO grouping: although it no longer operates as an entity, the utilities comprising the group share ownership of power generation units.

The electric energy from such units is distributed to the utilities according to ownership share percentages. Thus, in making an electricity fuel assessment, it is important to review both individual utilities' levels of supply and group fuel supply levels.

Groups 3 and 4 are holding companies of many utilities. Each group has a centralized power generation and distribution center that coordinates generation for the entire system. Emphasis has therefore been placed on fuel assessment for the entire system. For the American Electric Power Company, however, this report does not include data for the Columbus and Southern Electric Company. It is anticipated that a revision of the computer program which generates fuel assessment and inventory projections will be completed by the time of the December 15 report. The revision will reflect the incorporation of the Columbus and Southern Ohio Electric Company into the American Electric Power Company.

Group 5 is a single purpose utility: its main function is to supply power for the uranium enrichment plant at Portsmouth. It also sells surplus generation to many publicly owned utilities.

Source/Supplier of Fuel for Electric Generation

Fuels used in Ohio for electric generation include coal, oil, natural gas and nuclear fuel. At this time, nuclear fuel is not monitored by ODOE: all other fuels are monitored through the utilities' monthly reports. Tables 2 and 3 list coal and oil deliveries to power plants located in Ohio. The main sources of supply and/or suppliers of these fuels remain the same as in the last reporting period.

Coal deliveries to Ohio electric plants during the 1980-1981 heating season (November through March) declined 2.6 percent from the previous heating season, while deliveries of oil declined 38.7 percent.

Table 2. Source of Coal Supply to Electric Utilities (Ohio Portion) (In Thousand Short Tons)

Month	Coal Districts 1	2	3	4	6	7&8	9	Other	Total
1979									
January	----	176.9	45.2	2,296.6	241.5	1,076.7	129.6	392.0	4,308.5
February	5.7	103.4	52.7	2,124.4	237.9	901.7	124.5	285.6	3,835.9
March	0.5	158.0	60.4	2,516.0	313.8	1,172.8	149.4	231.7	4,602.6
April	32.6	141.3	76.7	2,207.3	276.0	1,405.5	107.7	334.0	4,453.1
May	3.0	106.8	75.4	2,475.0	358.0	1,340.1	143.2	371.0	4,822.5
June	10.2	120.7	83.1	2,369.5	356.3	1,336.7	135.8	388.8	4,803.1
July	6.5	105.7	62.6	1,874.7	178.7	785.2	134.6	425.0	4,573.0
August	6.5	81.2	68.0	2,469.7	295.3	1,242.4	196.2	333.5	4,692.8
September	1.0	148.1	75.5	2,229.4	285.5	1,171.9	92.0	309.8	4,313.2
October	1.0	100.1	63.2	2,382.9	484.5	1,228.1	112.6	296.6	4,669.0
November	0.5	162.4	25.4	2,263.8	286.4	1,398.2	128.4	251.1	4,516.2
December	----	158.9	17.6	2,099.3	289.9	1,370.7	120.7	29.5	4,086.6
Total	67.5	1,565.5	705.8	27,258.6	3,603.8	14,380.0	1,574.7	3,648.6	52,804.5
% of Total	0.1	3.0	1.3	51.6	6.8	27.2	3.0	6.9	
1980									
January	----	210.9	27.0	2,202.8	327.2	1,140.8	131.5	316.8	4,357.0
February	----	136.3	46.9	1,872.3	500.9	964.9	100.3	216.8	3,838.2
March	----	200.4	34.8	2,114.1	126.9	1,485.5	94.6	356.6	4,412.9
April	----	254.1	44.7	2,096.0	215.9	1,216.8	66.1	200.8	4,094.4
May	0.1	165.1	49.0	2,225.2	270.1	1,252.5	125.4	167.8	4,255.2
June	----	158.4	56.5	2,111.3	291.9	1,501.7	159.0	165.4	4,444.2
July	----	151.3	47.1	1,932.9	173.1	892.3	72.8	201.3	3,470.8
August	----	182.6	78.8	2,164.6	261.6	1,295.8	115.1	242.1	4,340.6
September	----	217.5	78.7	2,124.4	275.2	1,286.4	81.5	118.3	4,182.0
October	----	202.1	95.1	2,164.6	265.1	1,388.9	103.4	56.1	4,275.3
November	----	161.5	107.6	1,958.0	261.1	1,094.6	38.8	155.8	3,777.4
December	----	212.4	103.7	2,070.7	233.1	1,130.3	73.3	251.9	4,075.4
Total	0.1	2,252.6	769.9	25,036.9	3,202.1	14,650.5	1,161.6	2,449.4	49,523.4
% of Total	0.0	4.5	1.6	50.6	6.5	29.6	2.3	4.9	
1981									
January	----	137.9	82.7	2,241.6	270.6	1,269.2	106.7	319.4	4,428.1
February	----	178.5	91.2	2,063.3	242.3	1,120.4	37.7	196.4	3,929.8
March	----	193.2	137.2	2,333.0	125.5	1,304.2	19.1	332.3	4,444.5

District

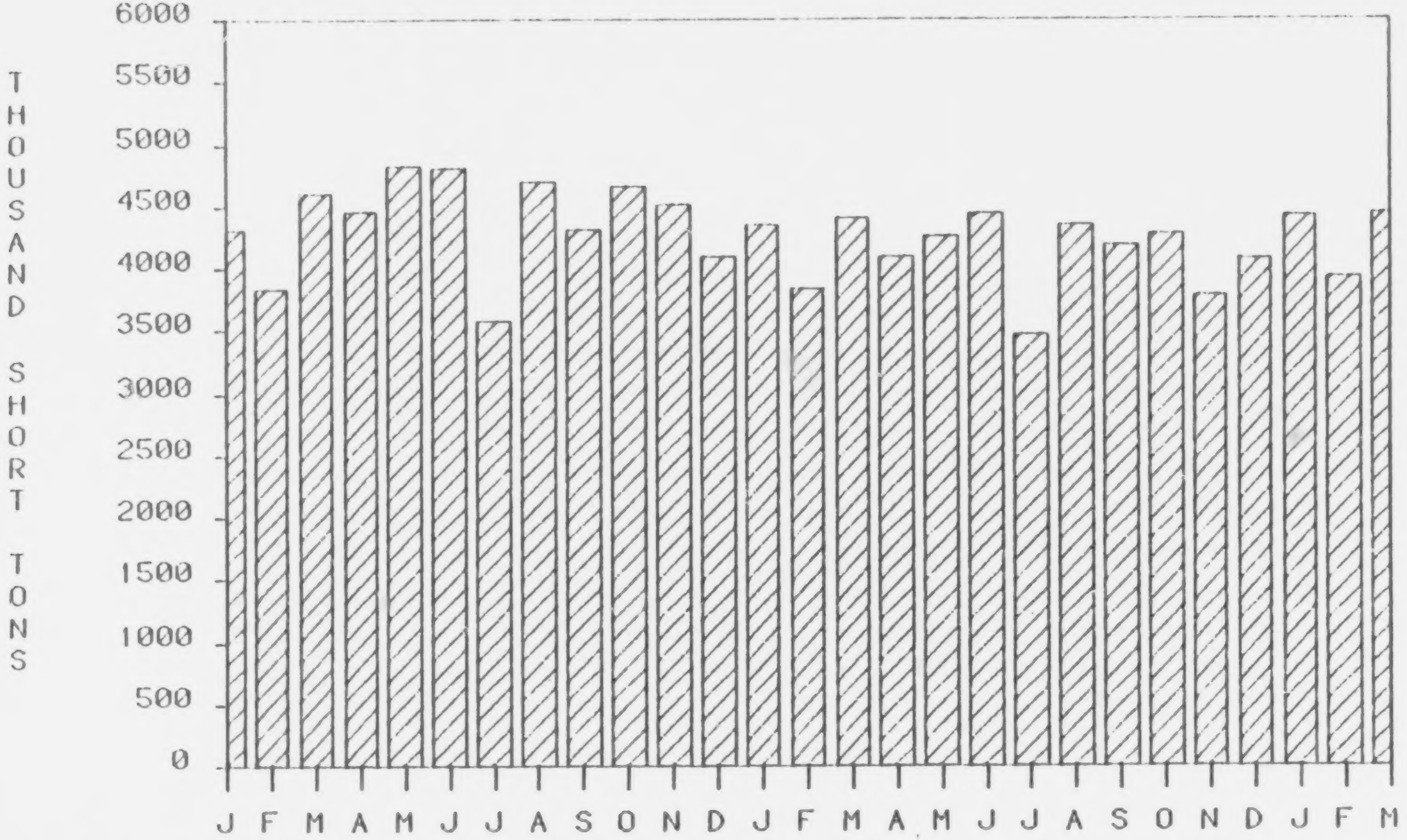
1. Eastern Pennsylvania
2. Western Pennsylvania
3. Northern West Virginia
4. Ohio
6. Panhandle in West Virginia
7. Southern No. 1 (In West Virginia and Virginia)
8. Southern No. 2 (In West Virginia, Virginia and Eastern Kentucky)
9. Western Kentucky

Other - Primarily from Wyoming and Utah

(For details, see Keystone Coal Industry Manual, 1977 by McGraw-Hill).

Source: Ohio Electric Utilities' FPC Form 423 and the Ohio Department of Energy.

FIGURE 2. MONTHLY COAL DELIVERIES TO POWER PLANTS IN OHIO
(JANUARY 1979 - MARCH 1981)



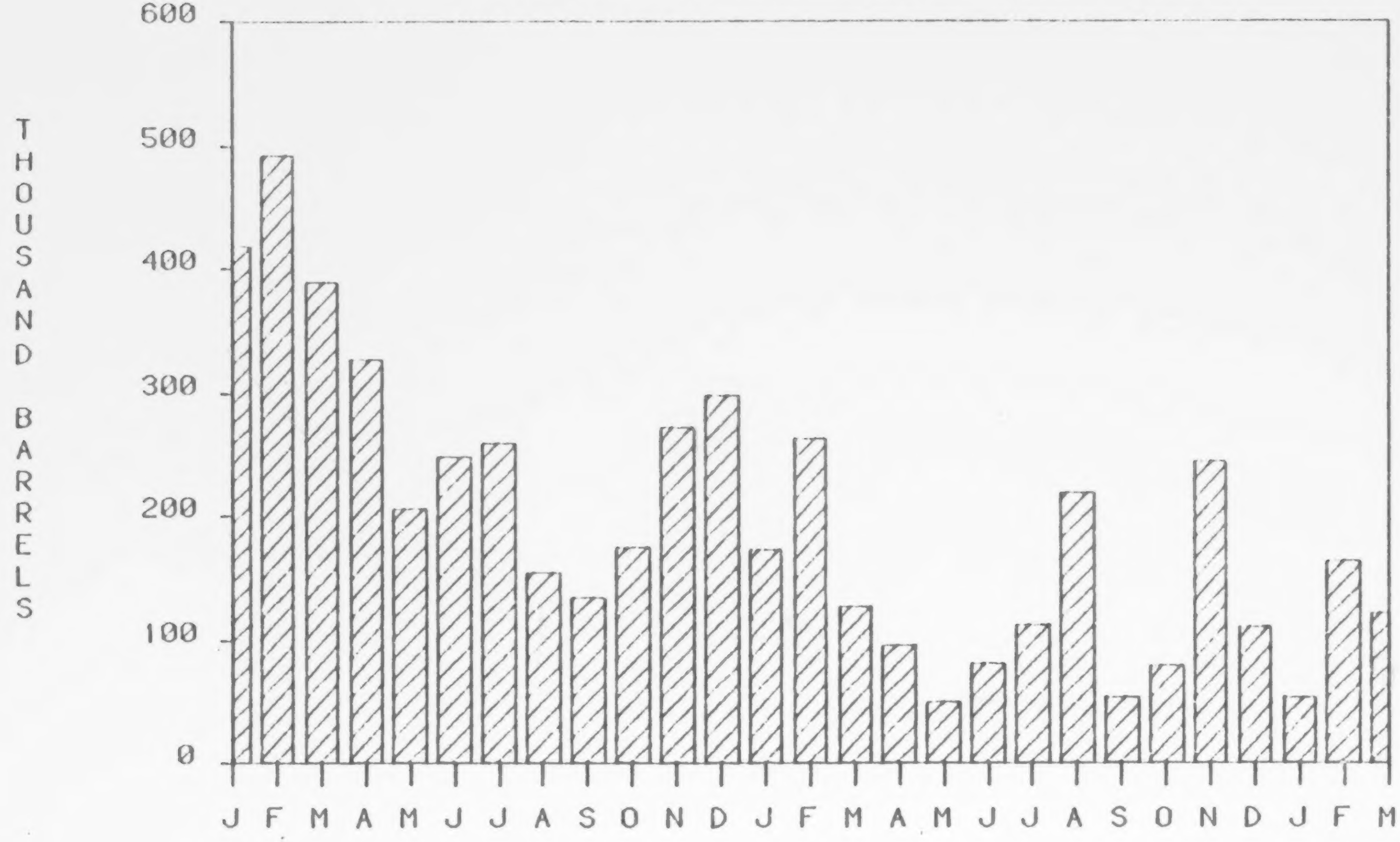
SOURCE: OHIO DEPARTMENT OF ENERGY

Table 3. Major Oil Suppliers to Electric Utilities
(Ohio Portion)
(Thousand Barrels)

1979	Allied	Marathon	McCarty	Standard	Union	Other	Total
January	342.3	4.1	0.6	27.1	14.5	29.1	417.7
February	357.6	3.2	12.5	41.2	19.5	56.2	491.2
March	346.1	1.5	4.6	23.3	12.3	1.6	389.4
April	289.9	0.8	--	13.1	2.6	20.6	327.1
May	172.5	1.5	--	18.0	1.6	12.8	206.4
June	206.8	0.4	--	22.5	2.8	16.5	249.0
July	236.8	0.2	--	16.6	4.4	0.5	258.5
August	120.6	0.4	--	31.8	2.6	--	155.4
September	102.7	0.4	--	29.4	2.4	--	134.9
October	126.3	9.4	--	30.3	6.1	2.7	174.8
November	216.9	1.3	--	34.4	1.9	17.3	271.8
December	242.1	0.5	--	46.4	4.8	2.8	296.6
Total	2,760.6	23.7	17.7	334.1	75.6	161.1	3,372.8
% of Total	81.8	0.7	0.5	9.9	2.2	4.8	
1980							
January	105.0	0.2	--	49.9	4.2	14.9	174.2
February	214.0	0.2	--	44.4	4.2	--	262.8
March	73.9	0.4	--	49.9	3.3	0.1	127.6
April	77.4	0.2	--	14.0	4.7	0.7	97.0
May	40.0	0.2	--	5.1	4.5	1.1	50.9
June	40.5	--	--	35.1	4.7	1.0	81.3
July	71.8	--	--	34.4	4.4	1.2	111.8
August	111.2	42.9	--	45.4	3.5	15.5	218.5
September	39.5	3.8	--	6.4	3.8	0.4	53.9
October	60.9	2.2	--	9.4	4.9	1.7	79.1
November	173.6	0.4	--	21.6	2.3	46.4	244.3
December	94.6	0.6	--	3.4	2.3	10.1	111.0
Total	1,102.4	51.1	--	319.0	46.8	92.2	1,612.4
% of Total	68.4	3.2		19.8	2.9	5.7	
1981							
January	32.6	1.0	--	0.7	3.6	16.0	53.9
February	141.8	--	--	4.0	2.6	15.6	164.0
March	93.8	0.2	--	4.5	4.9	17.9	121.3

Source: Ohio Electric Utilities' FPC Form 423 and the Ohio Department of Energy.

FIGURE 3. MONTHLY OIL DELIVERIES TO POWER PLANTS IN OHIO
(JANUARY 1979 - MARCH 1981)



SOURCE: OHIO DEPARTMENT OF ENERGY

Electric Generation by Type of Fuel

Coal is the main source of fuel for electric generation in Ohio, and its position is not expected to change in the foreseeable future. In 1980, 97 percent of total electricity generated in Ohio was from coal, an increase of 1 percent over a year ago; oil-generated electricity accounted for 1 percent, as it did in 1979; and nuclear-generated electricity accounted for 2 percent, a decrease of 1 percent from 1979. The amount of electricity generated from natural gas is very small compared to total generation. A boost in nuclear power generation in Ohio is expected in 1982, when the Zimmer facility is scheduled to come on line.

Table 4 and Figure 4 show the combined monthly totals of the reporting utilities' net generation from Ohio plants. Historical power plant fuel consumption and fuel stocks are displayed in Table 5. The build up and subsequent decline in coal stocks from mid 1980 through May 1981 was occasioned by a coal strike settled in June 1981.

Historical Patterns of Ohio Electric Consumption

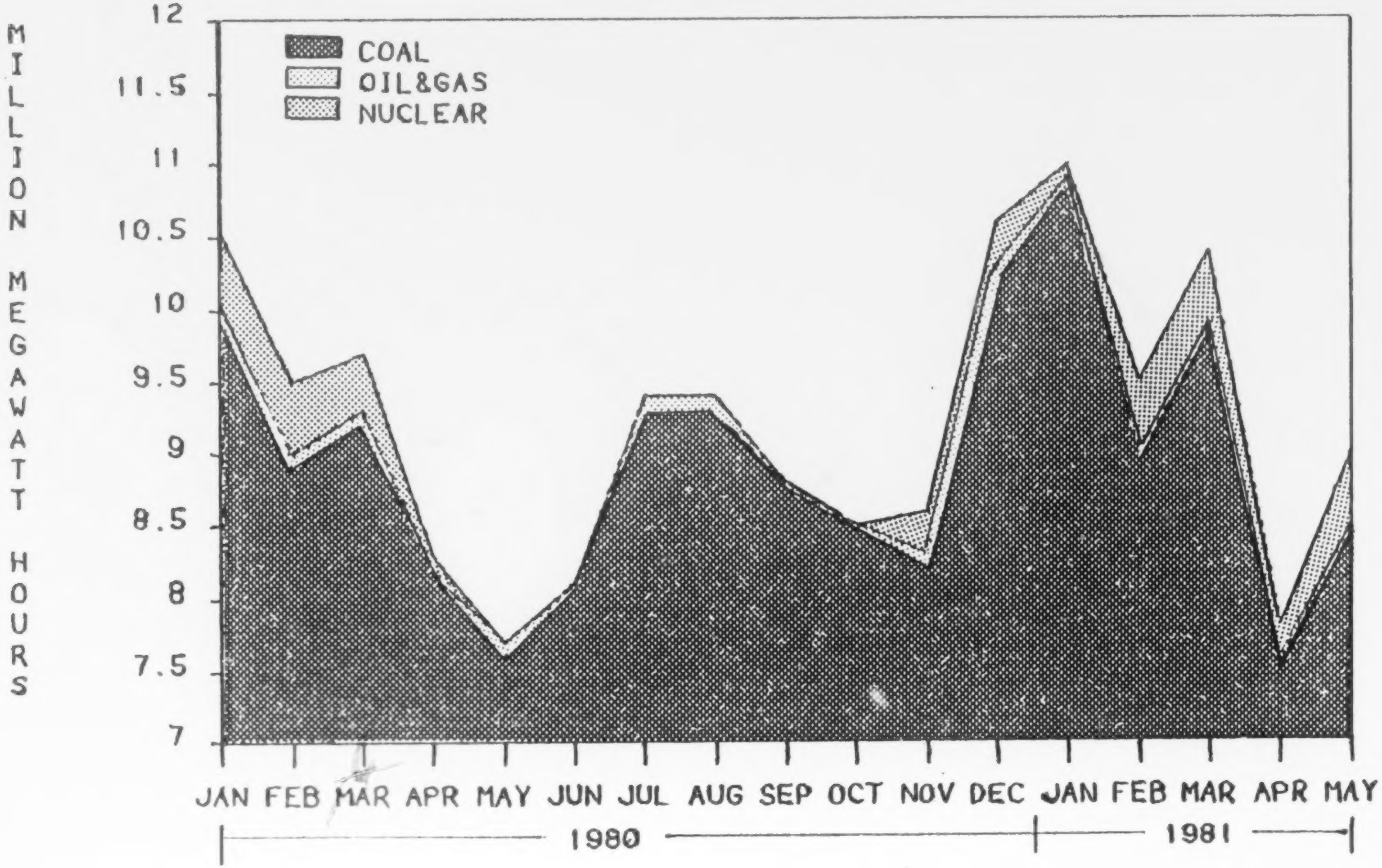
Since the 1973 OPEC oil embargo and with the escalation of energy prices, the pattern of electricity consumption in Ohio has changed dramatically. Increasing prices have stimulated conservation activities and fostered economic conditions that have resulted in reduced growth rates in the demand for electricity. For the twelve month period ending in May 1981, total electricity consumption in the state was 0.1 percent lower than during the same period one year ago (see Table 6 and Figure 5). The decline is attributable to declining demand in the industrial sector, where demand fell 4.3 percent from the previous year. Residential and commercial sector demand increased by 4.2 and 4.4 percent respectively, however.

Table 4. Major Ohio Utilities - Net Generation by Type of Fuel (Ohio Portion) (Thousand MWH)

	Coal		Oil		Gas	Nuclear		Total
1979								
January	10,092	(95%)	296	(3%)	9	260	(2%)	10,656
February	9,042	(92%)	315	(3%)	10	458	(5%)	9,825
March	9,263	(93%)	167	(2%)	6	505	(5%)	9,940
April	8,965	(99%)	87	(1%)	5	0		9,057
May	9,016	(99%)	94	(1%)	8	0		9,118
June	9,205	(98%)	140	(2%)	7	0		9,352
July	9,291	(95%)	78	(1%)	8	389	(4%)	9,766
August	9,613	(93%)	57	(1%)	3	642	(6%)	10,316
September	9,126	(94%)	59	(1%)	6	478	(5%)	9,669
October	8,481	(95%)	119	(1%)	11	304	(3%)	8,915
November	8,922	(97%)	141	(2%)	20	128	(1%)	9,210
December	9,937	(99%)	93	(1%)	11	0		10,040
Total	115,864	(96%)	1,646	(1%)	104	3,164	(3%)	115,868
1980								
January	9,863	(94%)	92	(1%)	14	501	(5%)	10,472
February	8,865	(94%)	94	(1%)	13	480	(5%)	9,453
March	9,192	(95%)	81	(1%)	14	419	(4%)	9,706
April	8,204	(99%)	11	(0%)	5	99	(1%)	8,320
May	7,565	(100%)	27	(0%)	8	0		7,600
June	8,112	(100%)	27	(0%)	10	0		8,149
July	9,289	(99%)	67	(1%)	10	0		9,366
August	9,342	(99%)	101	(1%)	41	0		9,484
September	8,781	(100%)	36	(0%)	3	0		8,820
October	8,516	(100%)	29	(0%)	5	0		8,549
November	8,248	(95%)	86	(1%)	36	316	(4%)	8,687
December	10,230	(97%)	51	(0%)	78	304	(3%)	10,593
Total	106,207	(97%)	702	(1%)	237	2,119	(2%)	109,199
1981								
January	10,864	(99%)	38	(0%)	8	58	(1%)	10,968
February	9,032	(94%)	23	(0%)	7	513	(5%)	9,576
March	9,876	(95%)	31	(0%)	13	451	(4%)	10,371
April	7,646	(98%)	3	(0%)	2	160	(2%)	7,810
May	8,547	(94%)	19	(0%)	10	477	(5%)	9,054

Source: Ohio Electric Utilities' FPC Form 4 and the Ohio Department of Energy.

FIG. 4. MAJOR OHIO ELECTRIC UTILITIES NET GENERATION BY TYPE OF FUEL (OHIO PORTION)



SOURCE: OHIO DEPARTMENT OF ENERGY

Table 5. Major Ohio Electric Utilities
Fuel Consumption and Stocks
(Ohio Portion)

	Coal (Thousand Tons)		Oil (Thousand 42-Gal.Bbls)		Gas (MMCF)
1979	Burned	In Stock	Burned	In Stock	Burned
January	4,756.0	9,016.0	676.6	1,115.1	315
February	4,235.9	8,606.1	798.7	1,009.7	537
March	4,318.9	8,856.2	429.3	1,079.5	443
April	4,076.1	9,529.4	238.9	1,247.6	285
May	4,141.3	10,199.1	242.8	1,193.6	383
June	4,328.6	10,659.5	366.0	1,134.7	353
July	4,401.2	9,758.4	404.9	1,135.2	207
August	4,523.1	9,898.0	184.2	1,329.8	233
September	4,243.5	10,064.0	169.7	1,526.5	372
October	3,867.7	10,883.0	301.7	1,284.7	377
November	4,103.2	11,276.5	435.5	1,182.9	398
December	4,497.2	10,846.2	222.1	1,365.2	266
Total	51,492.0	---	4,470.4	---	4,169
Avg/Month	4,291.0	9,966.0	372.5	1,217.0	347
1980					
January	4,459.8	10,083.3	246.7	1,347.0	317
February	3,935.4	11,351.4	258.2	1,308.6	316
March	4,098.0	11,187.8	181.7	1,247.4	354
April	3.639.8	11,806.2	94.9	1,360.4	129
May	3,396.6	12,897.9	104.1	1,289.3	132
June	3,665.3	13,631.9	108.5	1,282.5	261
July	4,249.1	12,928.8	206.7	1,253.3	301
August	4,336.7	13,114.2	297.6	1,399.9	799
September	3,928.1	13,309.7	123.9	1,097.7	994
October	3,836.1	13,724.7	116.2	1,110.0	123
November	3,738.9	13,811.6	249.9	1,076.8	717
December	4,633.3	13,351.4	181.8	1,048.7	204
Total	47,917.2	---	2,170.2	---	4,647
Avg/Month	3,993.1	12,599.9	180.9	1,235.1	387
1981					
January	4,906.0	12,454.4	143.3	1,055.4	166
February	4,104.6	12,373.3	111.8	1,099.1	164
March	4,456.5	12,464.5	112.2	1,174.3	121
April	3,458.7	10,302.7	70.4	1,154.3	63
May	3,937.0	7,537.9	107.6	1,116.7	119

Source: FPC Form 4 of the major electric utilities and the Ohio Department of Energy.

Electric consumption by the residential and commercial sectors exhibits strong seasonal patterns while the industrial sector fluctuates widely with general economic conditions. In July 1980, industrial electric consumption dipped to the lowest point in recent years, reflecting a severe downturn in the manufacturing industry and more specifically the automobile related industries. Industrial electricity consumption has generally increased since that time, although not to the levels of early 1980.

Twelve-Month Electric Energy Demand Forecast

The electric demand forecast is prepared in two ways: 1) a utility by utility forecast is given, each forecast containing total projected demand for the utility's service area, which may or may not be located entirely within Ohio; and 2) an aggregate demand for electricity within the state of Ohio is forecasted by sector (residential, commercial and industrial).

Electric Demand Forecast by Utility Service Area

For each utility service area, two electric demand forecasts are provided. One of the forecasts is a reporting utility forecast and the other is provided by the Ohio Department of Energy (Appendix A, Tables A-1 through A-9).

The Ohio Department of Energy forecasts are based on monthly data from the utility reports between January 1970 and May 1981. No independent forecast is given for OVEC because this utility has only one customer whose demand is preplanned.

Because of the overlapping months for the forecasts prepared on July 1 and November 1, the utilities may elect to use their last forecasts for those overlapping months in the new forecasting period. Only the

Allegheny Power System chose to retain their earlier forecasts for July through October 1981. The American Electric Power Company, CEI, and Toledo Edison revised their forecasts downward and CG&E revised its forecast upward.

Utility forecasts of monthly demand for July 1981 through June 1982 are for the most part higher than those prepared by the Ohio Department of Energy. The only exceptions to that pattern are forecasts of demand of Cincinnati Gas and Electric Company and the Cleveland Electric Illuminating Company. Demand forecasts of the Ohio Department of Energy for the AEP System (excluding C&SOE), Columbus and Southern Electric Company, and Toledo Edison are much lower than forecasts prepared by the utilities (see Tables A-1 through A-9).

Electric Demand Forecast By Sector

Except for OVEC, Ohio's demand for electricity from all eight major reporting utilities may be estimated based on monthly consumption data from January 1971 through May 1981 (Table 6 and Figures 5 through 9). For each sector, this period provides a time series of 125 observations. Based on these observations, a forecasting model is constructed to generate a monthly forecast for the future months through June 1982. These sectoral forecasts are included in Appendix A, Tables A-10 through A-13.

The total Ohio demand forecast indicates that demand will be lower in every month than it was in the previous year (Table A-13). The residential sector demand forecast projects lower demand than the previous year for the months July 1981 through January 1982, followed by increases of 3.0, 3.7, 7.6, and 3.5 percent over the previous year for the months February 1982 through May 1982 (Table A-10). Commercial

Table 6. Ohio Electricity Consumption
June 1980 - May 1981
(Thousand MWH)

	June	July	August	September	October	November
Residential						
1980-81	1,942.2	2,387.1	2,711.1	2,560.5	2,012.9	2,193.3
1979-80	1,999.6	2,097.5	2,315.2	2,217.1	1,964.1	2,175.4
% Change*	-2.9	13.8	17.1	15.5	2.5	0.8
Commercial						
1980-81	1,622.4	1,830.1	1,946.0	1,907.2	1,617.6	1,579.3
1979-80	1,640.6	1,697.7	1,777.7	1,712.3	1,547.2	1,550.2
% Change*	-0.1	7.8	9.5	11.4	4.6	1.9
Industrial						
1980-81	3,616.0	3,475.9	3,621.3	3,806.1	3,910.3	3,823.2
1979-80	4,305.0	4,194.1	4,261.0	4,070.8	4,132.3	4,032.8
% Change*	-16.0	-17.1	-15.0	-6.5	-5.4	-5.2
Other						
1980-81	443.8	477.8	487.0	483.7	465.0	470.5
1979-80	444.3	444.7	459.6	444.4	461.0	458.7
% Change*	-0.11	7.4	6.0	8.8	1.1	2.6
Total						
1980-81	7,624.4	8,170.9	8,765.4	8,757.5	8,006.7	8,066.3
1979-80	8,389.4	8,434.0	8,813.5	8,444.3	8,104.6	8,217.1
% Change*	-9.1	-3.1	-0.5	3.7	-1.2	-1.8
Customers (000)						
Residential	3,428.6	3,426.5	3,427.6	3,429.6	3,433.8	3,439.2
Commercial	350.2	350.8	350.6	350.8	351.7	352.1
Industrial	22.7	22.8	22.9	22.9	23.0	23.0
Total	3,801.5	3,800.1	3,801.1	3,803.3	3,808.5	3,814.3

*Percentage change is from the same period of the previous year (1979-1980).

Notes: (1) Excludes sales to other utilities.

(2) Figures may not add to exact totals because of independent rounding.

(3) Figures reported include CG&E, CEI, C&SOE, DP&L, Monongahela Power, Ohio Edison, Ohio Power, and Toledo Edison.

Source: Ohio Electric Utility Institute's Monthly Summaries.

Table 6 Ohio Electricity Consumption (Continued)
June 1980 - May 1981
(Thousand MWH)

	December	January	February	March	April	May	Total
Residential							
1980-81	2,699.3	3,333.8	2,962.9	2,603.3	2,179.5	1,985.8	29,571.7
1979-80	2,541.1	2,946.4	2,978.8	2,827.9	2,374.0	1,955.3	28,392.4
% Change*	6.2	13.1	-0.5	-7.9	-8.2	1.6	4.2
Commercial							
1980-81	1,721.2	1,902.9	1,793.0	1,700.4	1,594.1	1,565.2	20,799.4
1979-80	1,642.2	1,732.7	1,785.8	1,720.5	1,596.7	1,518.9	19,922.5
% Change*	4.8	9.8	0.4	-1.2	-0.2	3.0	4.4
Industrial							
1980-81	3,918.8	3,861.1	3,952.8	4,048.0	3,927.2	3,930.4	45,891.1
1979-80	3,920.5	4,055.4	4,143.9	4,196.2	4,006.3	3,785.3	49,103.6
% Change*	0.0	-4.8	-4.6	-3.5	-2.0	3.8	-4.3
Other							
1980-81	506.1	507.8	502.2	506.5	420.6	390.7	5,662.6
1979-80	478.4	509.7	511.4	500.6	462.4	445.3	5,620.5
% Change*	5.8	-0.4	-1.8	1.2	-9.0	-12.3	0.7
Total							
1980-81	8,845.4	9,605.6	9,210.9	8,858.2	8,121.4	7,872.1	102,904.8
1979-80	8,582.2	9,244.2	9,419.9	9,245.0	8,439.5	7,704.9	103,038.6
% Change*	3.1	3.9	-2.2	-4.2	-3.8	2.2	-0.1
Customers (000)							
Residential	3,422.4	3,448.0	3,451.2	3,450.8	3,449.7	3,449.3	
Commercial	350.7	352.1	352.2	352.5	352.8	353.4	
Industrial	23.0	23.0	23.1	23.3	23.3	23.4	
Total	3,816.1	3,823.1	3,826.5	3,826.6	3,825.8	3,826.1	

*Percentage change is from the same period of the previous year (1979-1980).

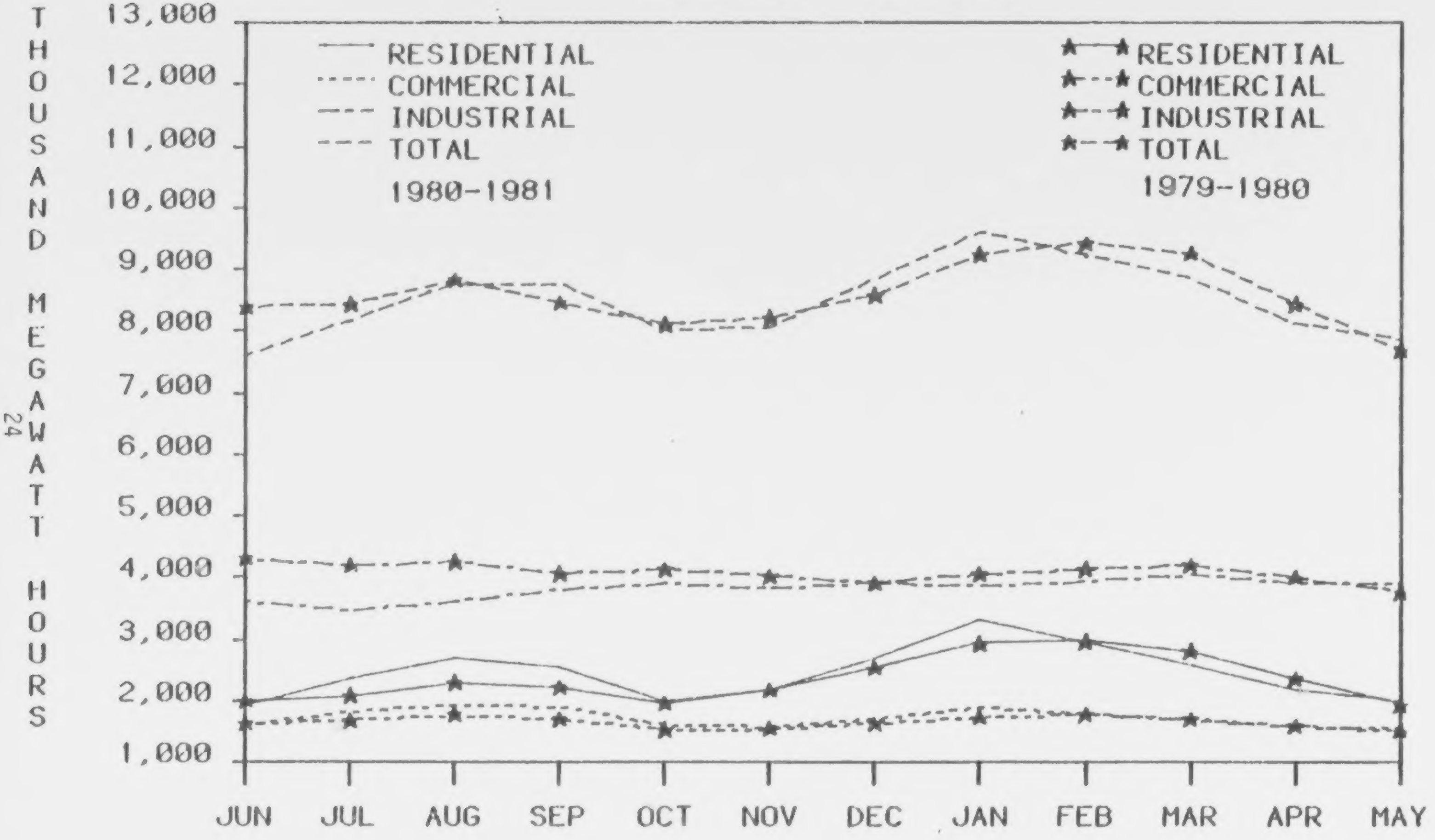
Notes: (1) Excludes sales to other utilities.

(2) Figures may not add to exact totals because of independent rounding.

(3) Figures reported include CG&E, CEI, C&SOE, DP&L, Monongahela Power, Ohio Edison, Ohio Power, and Toledo Edison.

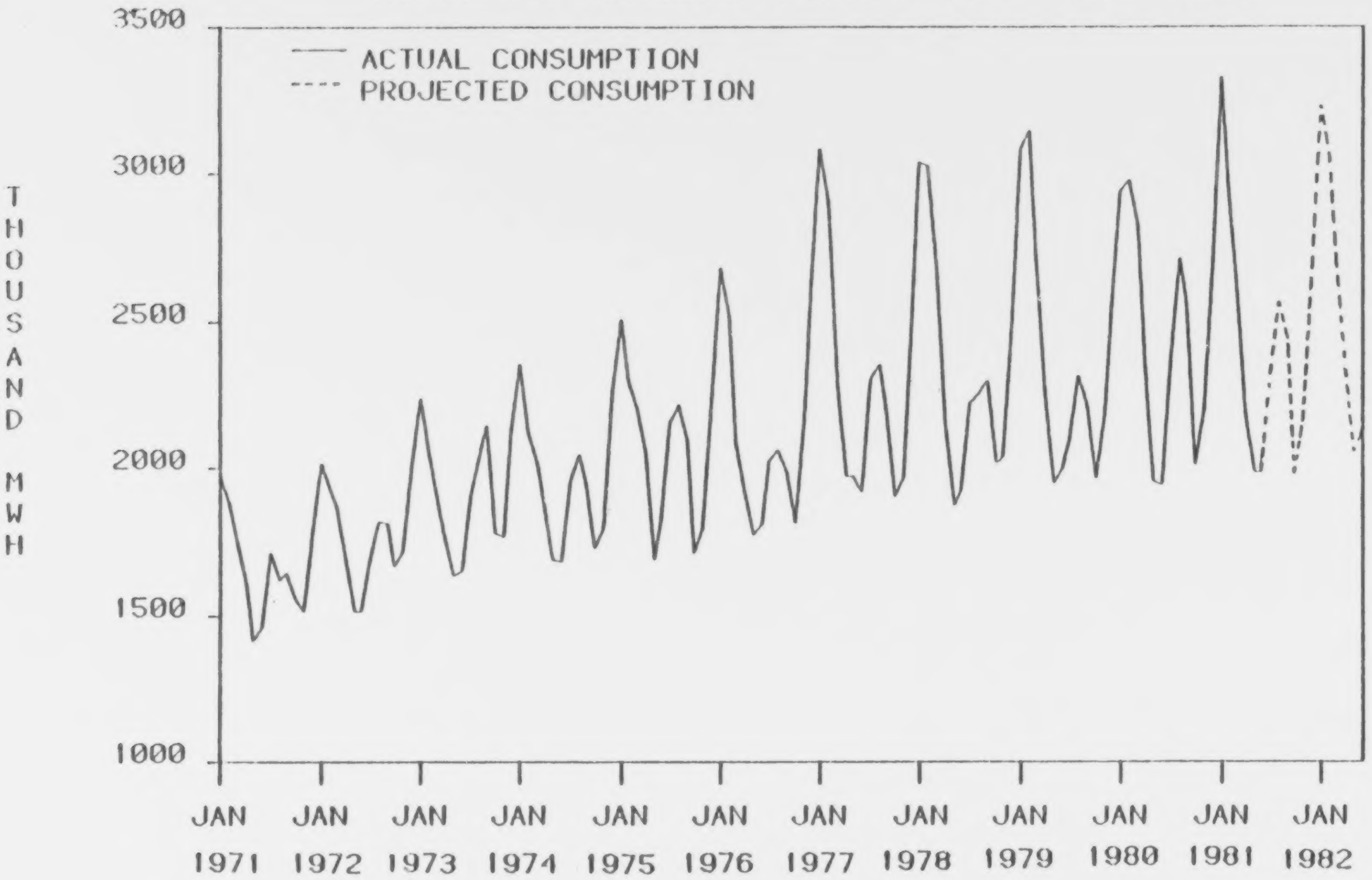
Source: Ohio Electric Utility Institute's Monthly Summaries.

FIG. 5. COMPARISON OF OHIO ELECTRICITY CONSUMPTION BY SECTOR
JUNE 1979 - MAY 1981



SOURCE: OHIO DEPARTMENT OF ENERGY

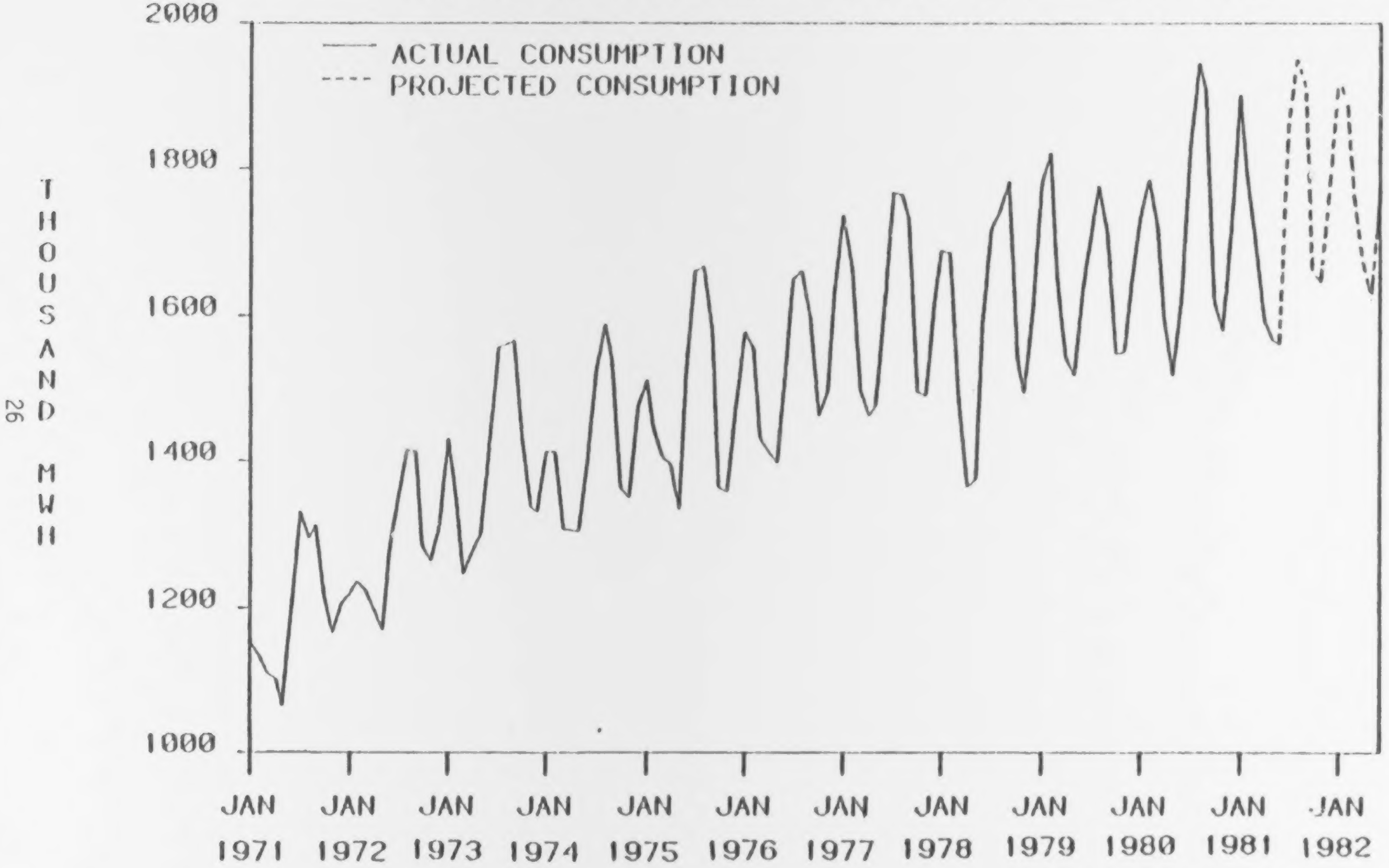
FIGURE 6. MONTHLY OHIO RESIDENTIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1971 - JUNE 1982)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE AND THE OHIO DEPARTMENT OF ENERGY

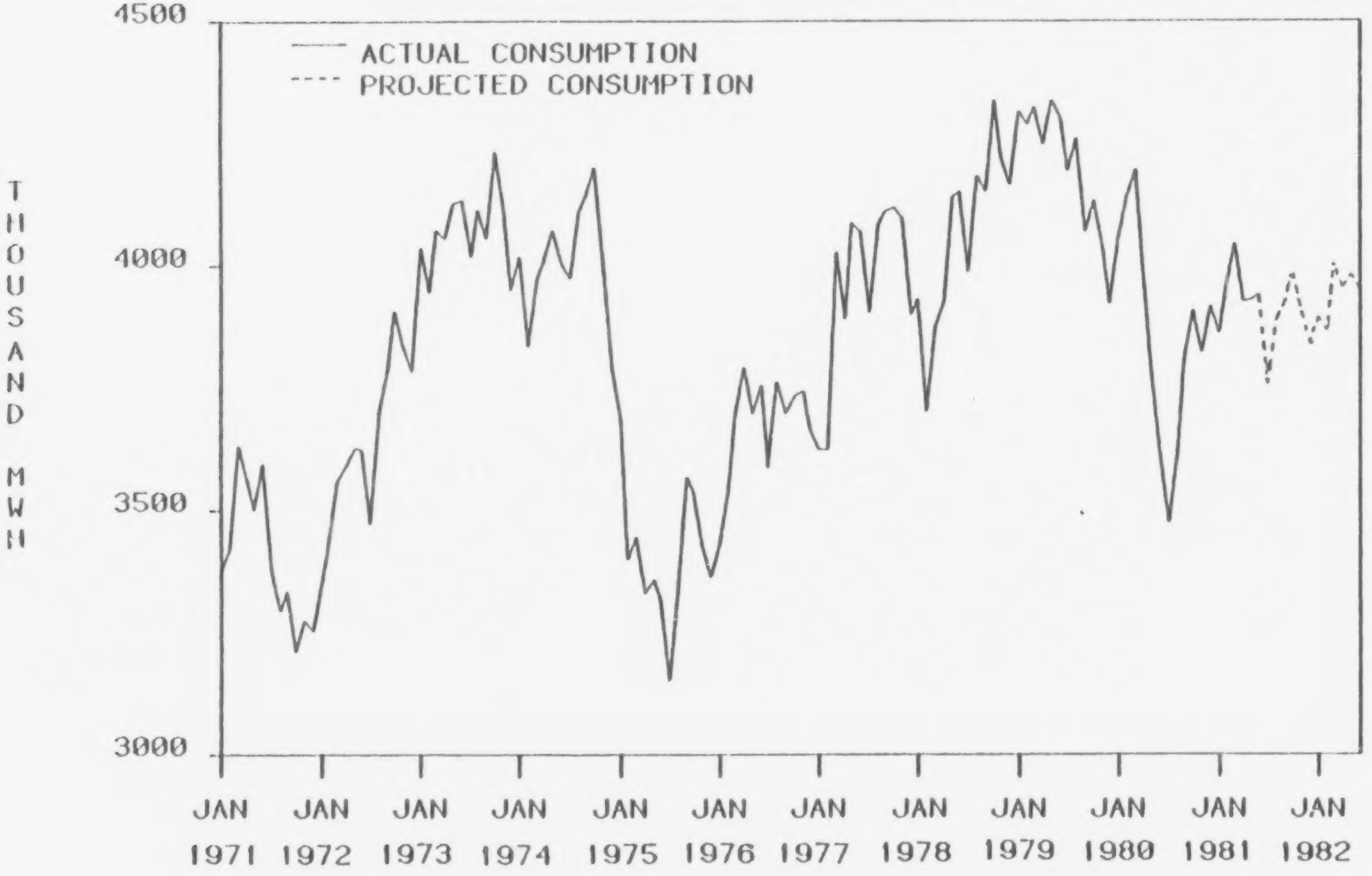
(EXCLUDING OVEC)

FIGURE 7. MONTHLY OHIO COMMERCIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1971 - JUNE 1982)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE AND THE OHIO DEPARTMENT OF ENERGY
(EXCLUDING OVEC)

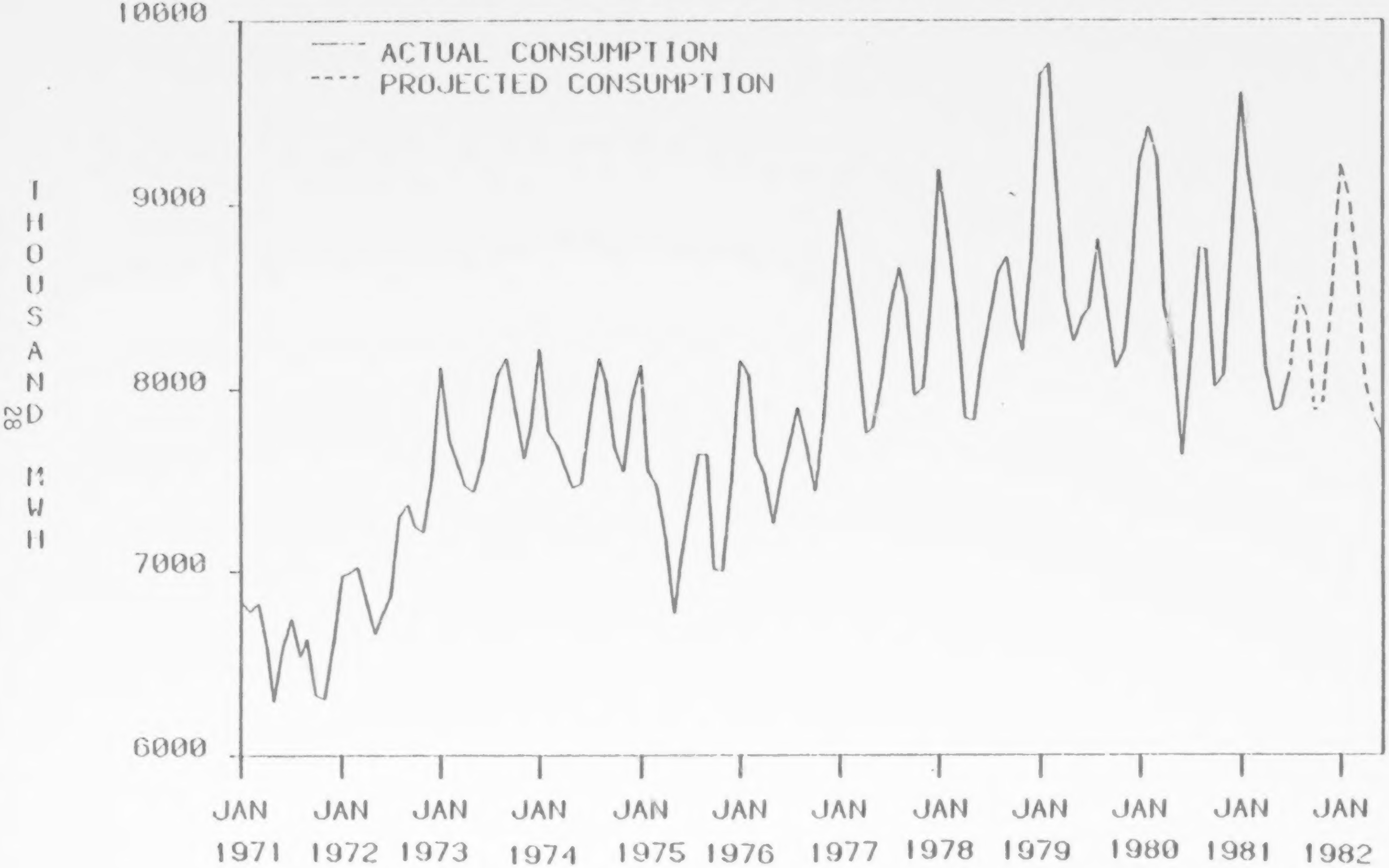
FIGURE 8. MONTHLY OHIO INDUSTRIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1971 - JUNE 1982)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE AND THE OHIO DEPARTMENT OF ENERGY

(EXCLUDING OVEC)

FIGURE 9. MONTHLY OHIO TOTAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1971 - JUNE 1982)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE AND THE OHIO DEPARTMENT OF ENERGY

(EXCLUDING OVEC)

sector demand is forecast to increase in each month of the forecasting period over the same month of the previous year (Table A-11). Industrial sector demand is forecast to increase by from 2.4 to 8.1 percent each month over the previous year from July 1981 through November 1981. It will remain almost stable or decline from the previous year from December 1981 through June 1982 (Table A-12).

Assessment of Fuel Adequacy by Utility/Utility Group

Average daily requirements were determined by dividing projected monthly coal consumption by the number of days in the month. End-of-month stocks were derived by considering consecutively end of June 1981 stocks, projected monthly coal delivery schedules as submitted by the utilities, and projected monthly coal consumption levels. Number of days' supply of coal was estimated on the basis of average daily requirements in subsequent months and the level of end-of-month stocks for the month in question.

Coal consumption projections were made through the use of a formula which adjusts coal consumption levels for changes in the consumption of oil, natural gas, and nuclear fuel in a manner that is consistent with the projected demand or net energy for load. In making these projections it is assumed that the following conditions will be satisfied:

1. Monthly demand (net energy for load) for July 1981 through June 1982 will be realized in the manner projected by the utility companies.
2. Energy required to supply project net energy for load in a given month of July 1981 through June 1982 will be proportional to the energy consumed in supplying the actual net energy for load in the respective months of July 1980 through June 1981.

3. Monthly delivery schedules for all fuels in 1981 through 1982 will be met in the manner projected by the utility companies.

In the case of the former CAPCO and CCD utility groups, where individual members have interconnected transmission systems and operate jointly owned generation units, the figures presented in this report for the total groups are more significant than those reported for the individual members. As displayed in Table 7, the number of days' supply of coal through the end of June, 1982 for AEP, APS, and former CCD and CAPCO utility groups ranges from 36 days for APS in January 1982 to 100 days for the former CCD group in June 1982. No coal supply disruption is foreseen during the forecasting period.

The assessment of oil adequacy is derived by using utilities' projected monthly consumption and deliveries. The projected deliveries are low when compared to the consumption levels experienced in the 1970's. Oil deliveries are believed sufficient, however, since the utilities have demonstrated their ability to reduce fuel oil consumption dramatically since the late 1970's. For the twelve month period from June 1980 through May 1981, utility consumption of oil was 38.4 percent lower than in the preceding twelve month period.

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model
(July 1981 - June 1982)

CAPCO GROUP (EXCLUDING DUQUESNE LIGHT COMPANY)

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	4468.1	4524.9	4233.6	4332.4	4293.9	4569.3	4904.7	4356.9	4622.9	4294.0	4293.7	4551.7	53446.1
EST DEMAND GEN BY COAL	3653.8	3712.0	3415.6	3544.0	3522.3	3871.7	4098.9	3150.2	3546.8	3395.2	3449.6	3757.9	43118.1
EST DEMAND GEN BY OIL	20.0	27.2	30.8	77.0	73.5	59.7	88.5	83.7	55.4	49.2	47.1	53.0	665.0
PROJ DAILY CONSUMPTION													
COAL (KTONS)	52.02	52.85	50.25	50.46	51.82	55.12	58.36	49.66	50.50	49.95	49.11	55.28	
OIL (KBBL)	1.39	1.89	2.21	5.36	5.28	4.15	6.16	6.45	3.86	3.54	3.28	3.81	
COAL DELIVERIES (KTONS)	1443.7	1557.0	1531.6	1664.2	1595.8	1554.3	1695.8	1496.3	1613.2	1603.1	1569.3	1617.7	18941.8
OIL DELIVERIES (KBBL)	25.79	38.14	80.31	119.37	89.77	81.12	118.33	89.16	108.69	145.11	116.96	96.40	1109.16
END OF MONTH STOCK													
COAL (KTONS)	3730.4	3649.1	3673.2	3773.3	3814.5	3660.0	3546.7	3652.7	3700.4	3805.1	3851.9	3811.1	
OIL (KBBL)	474.6	454.1	468.0	421.2	352.4	304.8	232.2	140.9	130.1	169.0	184.4	166.4	
NUMBER OF DAYS SUPPLY													
COAL	73.	72.	71.	70.	68.	68.	71.	73.	73.	72.	70.	69.	
OIL	128.	106.	94.	83.	67.	49.	41.	37.	37.	49.	48.	44.	

CLEVELAND ELECTRIC ILLUMINATING COMPANY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	1661.0	1668.0	1586.0	1615.0	1542.0	1685.0	1756.0	1544.0	1691.0	1550.0	1630.0	1685.0	19613.0
EST DEMAND GEN BY COAL	1079.6	1084.2	1030.9	1049.7	1002.3	1095.2	1141.4	926.4	1183.7	1085.0	1141.0	1044.7	12864.2
EST DEMAND GEN BY OIL	6.6	5.0	6.3	43.6	29.3	43.8	35.1	49.4	33.8	27.9	24.4	25.3	330.7
PROJ DAILY CONSUMPTION													
COAL (KTONS)	14.99	15.05	14.79	14.57	14.38	15.20	15.84	14.24	16.43	15.56	15.84	14.98	
OIL (KBBL)	0.48	0.36	0.47	3.12	2.17	3.13	2.51	3.91	2.42	2.06	1.75	1.87	
COAL DELIVERIES (KTONS)	432.8	444.8	426.6	465.5	464.7	440.0	467.4	409.6	500.5	513.6	515.9	453.4	5534.8
OIL DELIVERIES (KBBL)	9.52	0.0	31.10	46.64	22.21	25.55	42.69	37.93	79.60	79.60	37.93	37.93	450.70
END OF MONTH STOCK													
COAL (KTONS)	780.2	758.5	741.5	755.3	788.7	757.4	733.7	744.6	735.8	782.5	807.4	811.3	
OIL (KBBL)	309.9	298.8	315.8	265.8	223.0	151.4	116.2	44.5	49.1	66.9	50.6	32.4	
NUMBER OF DAYS SUPPLY													
COAL	52.	52.	51.	51.	51.	50.	48.	46.	47.	50.	54.	54.	
OIL	163.	132.	115.	99.	74.	50.	31.	18.	24.	38.	27.	17.	

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (Cont'd)
(July 1981 - June 1982)

OHIO EDISON SYSTEM

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	2123.8	2155.3	1977.1	2050.3	2073.7	2157.7	2372.6	2046.5	2163.6	2050.6	1999.8	2178.1	25349.1
EST DEMAND GEN BY COAL	2166.3	2198.4	2016.6	2091.3	2115.2	2330.3	2562.4	1882.8	1990.5	1886.6	1839.8	2287.0	25367.1
EST DEMAND GEN BY OIL	10.6	19.4	21.7	30.8	41.5	12.9	33.2	14.3	10.8	14.4	16.0	17.4	243.1
PROJ DAILY CONSUMPTION													
COAL (KTONS)	32.38	32.86	31.14	31.25	32.67	34.83	38.30	31.15	29.75	29.13	27.50	35.32	
OIL (KBBL)	0.73	1.33	1.54	2.10	2.93	0.89	2.27	1.08	0.74	1.01	1.09	1.23	
COAL DELIVERIES (KTONS)	870.9	932.2	915.0	1008.7	947.1	925.3	1056.9	889.4	899.7	864.8	869.9	1010.1	11189.8
OIL DELIVERIES (KBBL)	10.08	32.67	37.30	47.85	55.36	32.90	73.85	38.04	27.00	62.41	61.17	55.97	534.61
END OF MONTH STOCK													
COAL (KTONS)	2699.5	2613.1	2593.9	2633.6	2600.8	2446.4	2316.1	2333.2	2310.7	2301.4	2318.9	2269.4	
OIL (KBBL)	104.8	96.3	87.5	70.2	37.7	43.1	46.6	54.2	58.3	90.3	117.6	136.6	
NUMBER OF DAYS SUPPLY													
COAL	85.	83.	80.	76.	73.	72.	77.	81.	78.	72.	66.	64.	
OIL	69.	54.	39.	24.	35.	19.	50.	62.	55.	77.	95.	111.	

TOLEDO EDISON

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	683.3	701.6	670.5	667.1	678.2	726.6	776.1	766.4	768.3	693.4	663.9	688.6	8484.0
EST DEMAND GEN BY COAL	407.9	429.4	368.1	402.9	404.9	446.1	395.1	341.1	372.6	423.7	468.7	426.2	4886.7
EST DEMAND GEN BY OIL	2.7	2.8	2.7	2.7	2.7	2.9	20.2	19.9	10.8	6.9	6.6	10.3	91.3
PROJ DAILY CONSUMPTION													
COAL (KTONS)	5.28	5.56	4.92	5.22	5.42	5.78	5.11	4.89	4.82	5.67	6.07	5.70	
OIL (KBBL)	0.19	0.19	0.19	0.18	0.19	0.20	1.39	1.52	0.74	0.49	0.46	0.73	
COAL DELIVERIES (KTONS)	140.0	180.0	190.0	190.0	184.0	189.0	171.5	197.3	213.0	224.8	183.4	154.2	2217.2
OIL DELIVERIES (KBBL)	6.19	5.48	11.90	24.88	12.19	22.67	1.79	13.19	2.09	3.10	17.86	2.50	123.85
END OF MONTH STOCK													
COAL (KTONS)	231.4	239.0	281.3	309.6	331.2	341.1	354.1	414.5	478.0	532.7	528.1	511.3	
OIL (KBBL)	60.1	59.6	65.7	84.9	91.3	107.8	66.6	37.3	16.5	4.8	8.5	-11.0	
NUMBER OF DAYS SUPPLY													
COAL	43.	48.	53.	55.	61.	68.	71.	77.	82.	91.	93.	90.	
OIL	175.	148.	126.	112.	90.	89.	61.	60.	34.	11.	12.	-15.	

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (Cont'd)
(July 1981 - June 1982)

CCD GROUP

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	3383.9	3393.3	2956.9	2902.9	2999.9	3431.7	3692.3	3293.0	3178.9	2891.3	2938.0	3129.6	38191.7
EST DEMAND GEN BY COAL	3295.5	3145.2	2812.8	2957.6	3329.2	3805.5	4199.3	3658.3	2782.6	2500.5	2471.6	2631.7	37589.8
EST DEMAND GEN BY OIL	54.2	46.6	45.7	71.5	44.2	51.4	56.6	54.7	44.9	31.4	28.6	25.7	555.6
PROJ DAILY CONSUMPTION													
COAL (KTONS)	49.52	47.26	43.67	44.44	51.69	57.18	63.10	60.86	41.81	38.82	37.14	40.86	
OIL (KBBL)	7.95	6.82	6.92	10.48	6.70	7.53	8.30	8.88	6.59	4.76	4.20	3.89	
COAL DELIVERIES (KTONS)	1247.0	1729.0	1668.0	1595.0	1589.0	1738.0	1687.0	1537.0	1399.0	1381.0	1463.0	1464.0	18497.0
OIL DELIVERIES (KBBL)	77.86	67.73	36.45	64.50	26.14	60.91	78.90	95.69	104.69	20.21	37.45	58.45	728.99
END OF MONTH STOCK													
COAL (KTONS)	2812.4	3076.4	3434.2	3651.6	3689.9	3655.3	3386.3	3219.3	3322.2	3538.4	3850.2	4088.3	
OIL (KBBL)	3388.9	3245.1	3073.8	2813.3	2638.5	2465.9	2287.6	2134.6	2035.1	1912.4	1819.8	1761.5	
NUMBER OF DAYS SUPPLY													
COAL	62.	69.	70.	66.	61.	59.	69.	81.	86.	89.	94.	100.	
OIL	619.	606.	585.	571.	547.	532.	521.	518.	514.	489.	468.	453.	

CINCINNATI GAS & ELECTRIC

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	1475.2	1489.5	1245.5	1205.4	1249.5	1437.8	1558.7	1359.5	1313.3	1199.7	1275.7	1362.1	16171.9
EST DEMAND GEN BY COAL	1194.9	1206.5	1008.9	976.4	1149.5	1322.8	1434.0	1250.8	985.0	899.8	956.8	1021.6	13406.8
EST DEMAND GEN BY OIL	11.8	8.9	6.2	7.2	8.7	7.2	10.9	9.5	5.3	4.8	6.4	6.8	93.8
PROJ DAILY CONSUMPTION													
COAL (KTONS)	17.83	18.00	15.55	14.57	17.72	19.74	21.39	20.66	14.70	13.87	14.27	15.75	
OIL (KBBL)	2.01	1.53	1.10	1.23	1.54	1.23	1.86	1.80	0.90	0.85	1.09	1.20	
COAL DELIVERIES (KTONS)	600.0	600.0	513.0	500.0	525.0	600.0	600.0	550.0	500.0	520.0	550.0	550.0	6608.0
OIL DELIVERIES (KBBL)	10.00	45.00	15.00	35.00	0.0	30.00	30.00	50.00	70.00	0.0	20.00	40.00	345.00
END OF MONTH STOCK													
COAL (KTONS)	1347.8	1389.8	1436.2	1484.6	1477.9	1466.1	1402.9	1374.4	1418.9	1522.7	1630.2	1707.8	
OIL (KBBL)	124.4	122.1	104.1	100.9	54.6	46.6	18.9	18.5	60.7	35.4	21.6	25.6	
NUMBER OF DAYS SUPPLY													
COAL	83.	88.	84.	77.	72.	74.	86.	96.	97.	100.	104.	108.	
OIL	96.	95.	77.	70.	40.	25.	10.	21.	62.	32.	18.	21.	

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (Cont'd)
(July 1981 - June 1982)

DAYTON POWER & LIGHT

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	964.7	939.8	837.4	883.5	911.5	1030.8	1087.6	1004.5	969.6	860.6	857.3	905.5	11252.8
EST DEMAND GEN BY COAL	1109.5	1080.7	921.1	971.8	1139.3	1288.5	1468.3	1255.6	1018.1	877.8	814.5	860.2	12805.5
EST DEMAND GEN BY OIL	40.5	36.7	36.8	61.8	34.6	42.3	45.7	45.2	38.8	25.8	21.4	16.3	446.0
PROJ DAILY CONSUMPTION													
COAL (KTONS)	16.14	15.72	13.85	14.14	17.13	18.75	21.36	20.22	14.81	13.20	11.85	12.93	
OIL (KBBL)	2.61	2.36	2.45	3.98	2.31	2.72	2.94	3.22	2.50	1.72	1.38	1.08	
COAL DELIVERIES (KTONS)	250.0	574.0	599.0	513.0	561.0	584.0	610.0	513.0	396.0	387.0	445.0	428.0	5860.0
OIL DELIVERIES (KBBL)	60.00	15.00	14.00	22.00	18.00	23.00	41.00	38.00	27.00	13.00	10.00	11.00	292.00
END OF MONTH STOCK													
COAL (KTONS)	897.6	984.2	1167.8	1242.5	1289.7	1292.5	1240.3	1187.1	1123.9	1115.0	1192.7	1232.7	
OIL (KBBL)	3339.1	3280.9	3221.3	3119.8	3068.7	3007.3	2957.1	2904.8	2854.4	2815.8	2783.0	2761.5	
NUMBER OF DAYS SUPPLY													
COAL	61.	69.	73.	68.	64.	63.	75.	89.	89.	89.	92.	95.	
OIL	2666.	2648.	2631.	2621.	2607.	2597.	2604.	2611.	2605.	2587.	2565.	2545.	

COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	944.0	964.0	874.0	814.0	839.0	963.0	1046.0	929.0	896.0	831.0	805.0	862.0	10767.0
EST DEMAND GEN BY COAL	991.2	858.0	882.7	1009.4	1040.4	1194.1	1297.0	1152.0	779.5	723.0	700.3	749.9	11377.5
EST DEMAND GEN BY OIL	1.9	1.0	2.6	2.4	0.8	1.9	0.0	0.0	0.9	0.8	0.8	2.6	15.8
PROJ DAILY CONSUMPTION													
COAL (KTONS)	15.55	13.46	14.31	15.83	16.86	18.73	20.34	20.00	12.23	11.72	10.98	12.15	
OIL (KBBL)	0.37	0.19	0.53	0.48	0.17	0.38	0.0	0.0	0.18	0.17	0.16	0.52	
COAL DELIVERIES (KTONS)	397.0	555.0	556.0	582.0	503.0	554.0	477.0	474.0	503.0	474.0	468.0	486.0	6029.0
OIL DELIVERIES (KBBL)	7.86	7.73	7.45	7.50	8.14	7.91	7.90	7.69	7.69	7.21	7.45	7.45	91.99
END OF MONTH STOCK													
COAL (KTONS)	567.1	704.9	831.7	923.0	920.2	893.6	740.0	653.9	777.9	900.4	1027.9	1149.2	
OIL (KBBL)	17.0	18.8	10.3	2.9	6.0	2.2	10.1	17.8	20.0	22.1	24.7	16.4	
NUMBER OF DAYS SUPPLY													
COAL	41.	47.	51.	52.	48.	44.	43.	54.	68.	77.	85.	95.	
OIL	52.	36.	22.	17.	16.	71.	86.	96.	80.	64.	47.	31.	

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (Cont'd)
(July 1981 - June 1982)

AMERICAN ELECTRIC POWER SYSTEM

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	6230.0	6543.0	6147.0	6289.0	6552.0	7388.0	8162.0	7416.0	7289.0	6495.0	6401.0	6265.0	81176.9
EST DEMAND GEN BY COAL	7289.1	7459.0	6700.2	5408.5	7010.6	8422.3	9223.1	8305.9	8090.8	6819.7	6657.0	7204.7	88591.1
EST DEMAND GEN BY OIL	6.2	6.5	6.1	0.0	0.0	7.4	8.2	7.4	0.0	6.5	6.4	6.3	61.0
PROJ DAILY CONSUMPTION													
COAL (KTONS)	105.43	107.89	100.15	78.23	104.79	121.82	133.41	133.01	117.03	101.93	96.29	107.69	
OIL (KBBL)	3.50	3.67	3.57	0.0	0.0	4.15	4.58	4.61	0.0	3.77	3.59	3.63	
COAL DELIVERIES (KTONS)	2894.0	4044.0	4052.0	4243.0	3666.0	4055.0	3320.0	3324.0	3780.0	3338.0	3203.0	3412.0	43331.0
OIL DELIVERIES (KBBL)	57.52	56.65	56.32	52.98	61.60	60.23	60.36	59.05	57.86	62.47	62.40	56.31	703.76
END OF MONTH STOCK													
COAL (KTONS)	4659.6	5358.9	6406.6	8224.4	8746.8	9025.2	8209.6	7809.2	7961.3	8241.4	8459.3	8640.7	
OIL (KBBL)	444.1	386.9	336.2	389.2	450.8	382.5	300.8	230.8	288.6	238.0	189.0	136.3	
NUMBER OF DAYS SUPPLY													
COAL	44.	60.	68.	71.	68.	69.	67.	73.	79.	80.	79.	80.	
OIL	174.	155.	137.	118.	135.	120.	105.	94.	79.	66.	52.	38.	

ALLEGHENY POWER SYSTEM

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	2622.7	2724.7	2607.3	2717.0	2708.7	3021.6	3226.3	2992.0	2969.7	2697.9	2707.3	2602.6	33597.8
EST DEMAND GEN BY COAL	2911.2	3024.4	2894.1	3015.9	3006.7	3354.0	3581.2	3321.1	3296.4	3183.5	3194.6	3071.1	37854.0
EST DEMAND GEN BY OIL	26.2	24.5	18.3	19.0	13.5	15.1	16.1	15.0	8.9	10.8	10.8	7.8	186.1
PROJ DAILY CONSUMPTION													
COAL (KTONS)	38.60	40.10	39.65	39.98	41.19	44.47	47.48	48.75	43.70	43.61	42.35	42.07	
OIL (KBBL)	3.48	3.26	2.51	2.53	1.86	2.01	2.14	2.20	1.18	1.48	1.44	1.07	
COAL DELIVERIES (KTONS)	1202.7	1202.7	1202.7	1202.7	1202.7	1202.7	1296.9	1296.9	1296.9	1296.9	1296.9	1296.9	14997.2
OIL DELIVERIES (KBBL)	43.34	43.34	43.34	43.34	43.34	43.34	65.97	65.97	65.97	65.97	65.97	65.97	655.88
END OF MONTH STOCK													
COAL (KTONS)	2144.4	2104.0	2117.2	2080.3	2047.2	1871.4	1696.4	1628.3	1570.4	1558.8	1542.7	1577.4	
OIL (KBBL)	321.1	263.4	231.6	196.7	184.2	165.4	164.9	169.3	198.6	220.1	241.5	275.3	
NUMBER OF DAYS SUPPLY													
COAL	54.	53.	52.	49.	45.	39.	36.	37.	36.	37.	37.	37.	
OIL	127.	118.	108.	98.	87.	90.	104.	133.	163.	195.	225.	257.	

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (Cont'd)
(July 1981 - June 1982)

OHIO VALLEY ELECTRIC CORPORATION

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
DEMAND FORECAST (GWH)	1418.9	1363.0	1306.9	1383.4	1416.7	1468.1	1428.8	1259.0	1424.4	1373.2	1448.0	1356.5	16647.0
EST DEMAND GEN BY COAL	1418.9	1485.7	1489.9	1328.0	1345.8	1409.4	1343.1	1221.2	1310.5	1345.7	1448.0	1315.8	16462.1
EST DEMAND GEN BY OIL	1.4	1.4	1.3	1.4	1.4	1.5	1.4	1.3	1.4	1.4	1.4	1.4	16.6
PROJ DAILY CONSUMPTION													
COAL (KTONS)	19.74	20.67	21.42	18.48	19.35	19.61	18.69	18.81	18.23	19.35	20.15	18.92	
OIL (KBBL)	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	
COAL DELIVERIES (KTONS)	691.1	668.0	639.6	655.6	663.5	684.0	598.3	530.4	604.3	587.3	697.2	669.8	7689.1
OIL DELIVERIES (KBBL)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	18.00
END OF MONTH STOCK													
COAL (KTONS)	855.3	882.5	879.6	962.4	1045.4	1121.5	1140.6	1144.3	1183.3	1190.2	1262.9	1365.2	
OIL (KBBL)	4.7	3.4	2.3	1.1	-0.3	-1.7	-3.1	-4.1	-5.4	-6.7	-8.1	-9.3	
NUMBER OF DAYS SUPPLY													
COAL	41.	43.	47.	49.	54.	60.	62.	61.	60.	61.	67.	72.	
OIL	53.	39.	26.	11.	-3.	-19.	-34.	-45.	-59.	-72.	-89.	-103.	

NATURAL GAS

Service shares of the gas distribution companies operating in Ohio are presented in Table 8 for the annual period June 1980 to May 1981. During this period of time, the four large distribution companies - Cincinnati Gas and Electric, Columbia Gas of Ohio, Dayton Power and Light, and East Ohio Gas - jointly distributed 93.93 percent of the reported natural gas requirements of the state. The four intermediate companies - National Gas and Oil, Ohio Gas, River Gas, and West Ohio Gas - distributed an additional 4.33 percent. The remaining 1.74 percent of the reported natural gas requirements were distributed by 22 small utilities and two municipal utilities. The figures presented in Table 8 do not include self-help natural gas.

Supply

The major supplies of natural gas for the state of Ohio are presented in Table 9, and shown graphically in Figure 10. Between June 1980 and May 1981, the eight major gas distribution companies of Ohio, which together account for 98.26 percent of the reported natural gas distribution in the state, procured 919,397 MMCF of natural gas to meet Ohio's requirements. This represents a 4.7 percent decrease in the supplies of natural gas to Ohio compared to the same period last year. This decline is not due to a reduction in the availability of natural gas supplies as such. Rather, this reflects an adjustment by Ohio's gas distribution companies to the declining demand for natural gas by residential, commercial, and especially industrial end users in Ohio. The various causes are effective conservation measures, the recession of 1980-1981, and the latest round of price increases for fuel oil and natural gas in 1980.

Table 8. Total Natural Gas Requirements of All Commercial Utilities in Ohio Between June 1980 and May 1981 (MMCF)

	(1) Sales to All End Users	(2) Storage (In)	Total Requirement (1+2)	Percent of Total Ohio Requirement
Cincinnati Gas and Electric Co.	89,317	0	89,317	9.55
Columbia Gas of Ohio	342,491	-4,283	338,208	36.15
Dayton Power and Light Co.	59,367	595	59,962	6.41
East Ohio Gas Co.	330,844	60,502	391,346	41.82
National Gas and Oil Co.	14,516	930	15,446	1.65
Ohio Gas Co.	7,013	31	7,044	0.75
River Gas Co.	4,559	0	4,559	0.49
West Ohio Gas Co.	13,510	0	13,510	1.44
Total Eight Utilities	861,617	57,775	919,392	98.26
Total Small Major Utilities	8,634	--	8,634	0.92
Municipal Utilities	7,661	--	7,661	0.82
Total All Utilities	877,912	57,775	935,687	100.00

Source: ODOE Form SG-2 and SG-4.

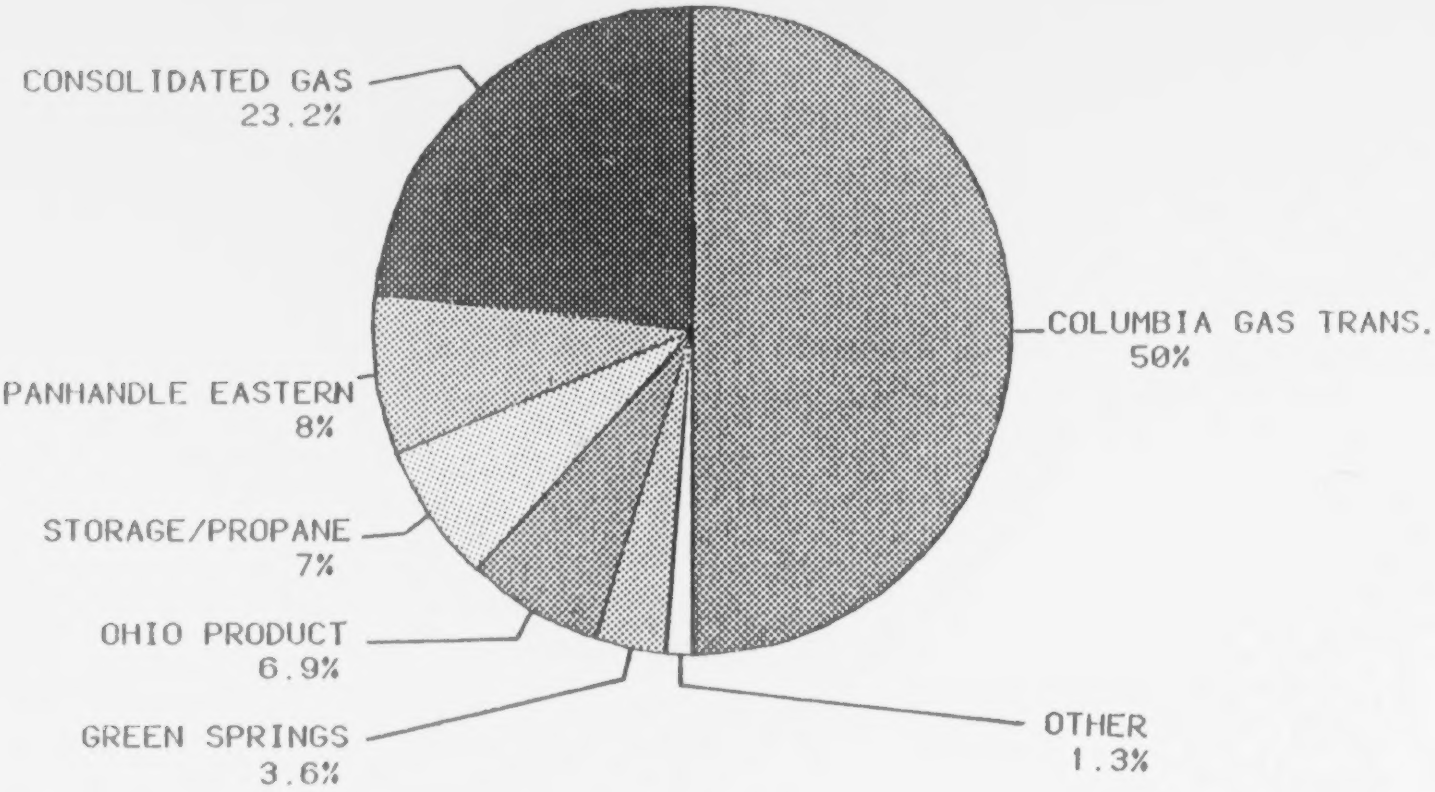
Table 9. Sources of Natural Gas Supplies to the Eight Major Gas Utilities Between June 1980 and May 1981 (MMCF)

Source	Supply	Percent Of Total	Rank
Columbia Gas Transmission Corp.	460,096	50.04	1
Consolidated Gas Supply Corp.	213,334	23.20	2
Lawrenceburg Gas Transmission Corp.	2,504	0.27	8
Michigan/Wisconsin Pipe Line Co.	621	0.07	10
Panhandle Eastern Pipe Line Co.	73,308	8.00	3
Tennessee Gas Pipeline Co.	1,746	0.19	9
Texas Eastern Transmission Corp.	7,068	0.77	7
Texas Gas Transmission Corp.	261	0.03	11
Green Springs (SNG)	32,644	3.55	6
Storage/Propane*	63,987	7.00	4
Other	-43	0.00	
Total SNG and Out-of-State	855,526	93.05	
Ohio Product	63,871	6.95	5
Total	919,397	100.00	

*Gas in storage represents a source during the period under consideration.

Source: ODOE Form SG-2.

FIGURE 10. SOURCE OF NATURAL GAS SUPPLY TO THE EIGHT MAJOR OHIO GAS UTILITIES (JUNE 1980 - MAY 1981)



SOURCE: THE OHIO DEPARTMENT OF ENERGY

Of the 919,397 MMCF of total procurement, 93.05 percent is interstate gas purchases and SNG. The remaining 6.95 percent is purchases of Ohio gas. The 63,871 MMCF of Ohio production of natural gas purchased by the eight major gas utilities between June 1980 and May 1981 represents a 10.3 percent decrease below their purchases of Ohio product during the preceding annual period. This amount corresponds approximately to 46 percent of the state's total production in the calendar year 1980. The remainder of the natural gas produced in Ohio is either transported directly to end users in the self-help program, or is distributed by some of the 22 smaller utilities and the municipal gas utilities.

Domestic interstate gas is the major source of supply for Ohio. Columbia Gas Transmission Corporation and Consolidated Gas Supply Corporation have provided 73.24 percent of the natural gas supplied to the eight major Ohio gas distribution companies. No LNG imports were included in these supplies; and no LNG imports are anticipated by Columbia as a source of supply for the 1981-82 heating season.

Table 10 exhibits a monthly comparison of actual and projected supplies, by source, for the eight major gas utilities. Actual levels and sources of supplies to individual utilities, for the past two years, are presented in Appendix B, Tables B-1 through B-8.

Historical Behavior of Monthly Sectoral Requirements

The regularities in the monthly time series behavior of residential, commercial, industrial, and total natural gas requirements in Ohio, from January 1970 through May 1981, are displayed in Figures 11, 12, 13, and 14. The seasonal variation in residential and commercial requirements can easily be discerned from these illustrations. Natural gas usage in all sectors peaks during the heating season, and falls off during the

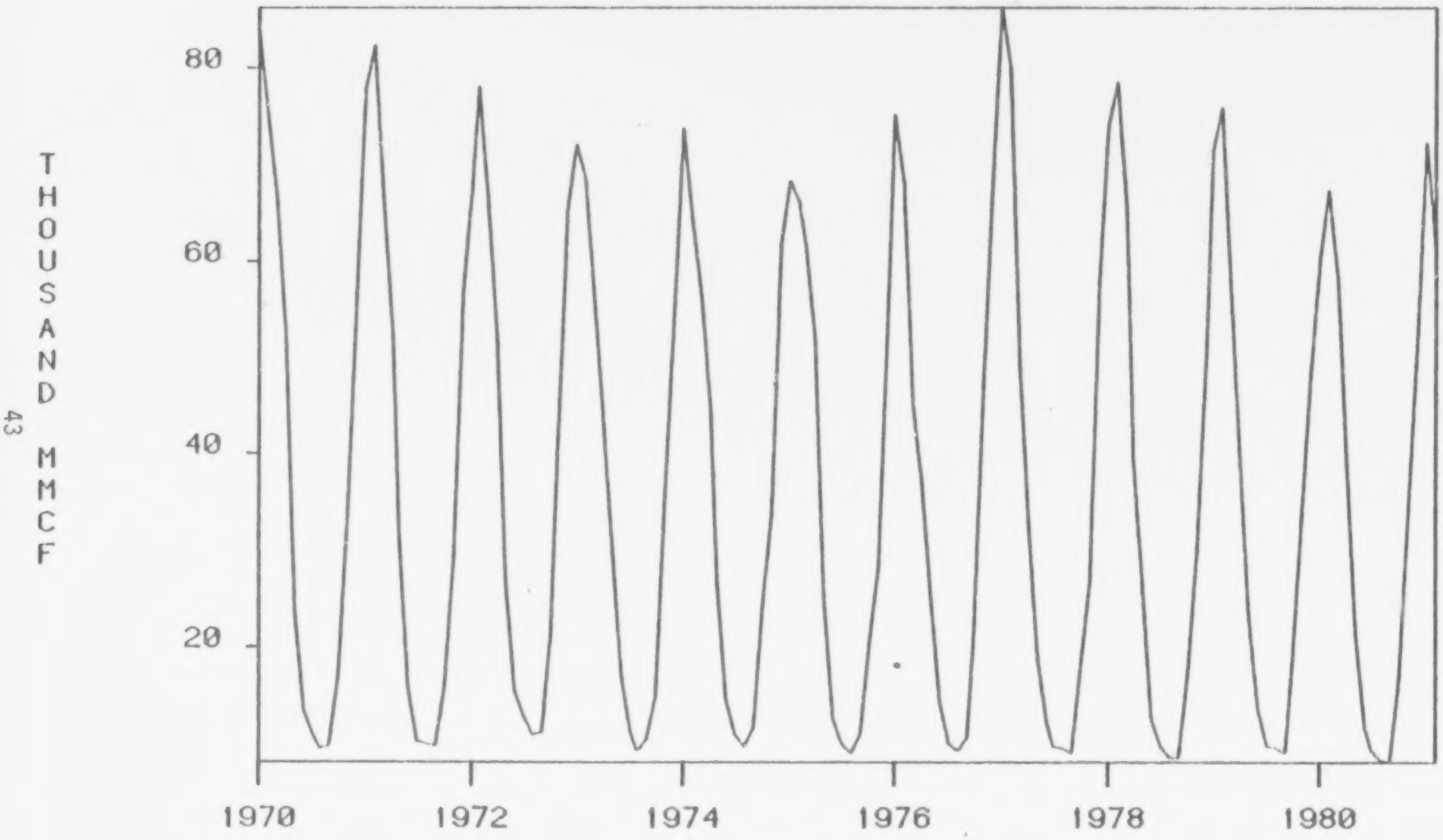
Table 10. Comparison Between One Year of Actual and Forecast Supply for Eight Major Ohio Gas Utilities by Source (MMCF)

MO/YR	COLUMBIA GAS	CONSULID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/PROPANE	OTHER	TOTAL SUPPLIES
6/81	22428	14910	195	7	6206	150	600	7	0	5351	1636	165	15	51670
6/80	17133	12588	259	5	5567	149	546	6	0	5514	1635	142	-117	43427
	30.9%	18.4%	-24.7%	40.0%	11.5%	0.7%	9.7%	16.7%	0.0%	-3.0%	0.1%	16.2%	112.8%	19.0%
7/81	17768	12317	263	7	6268	125	620	9	0	5138	1633	170	-5	44313
7/80	15694	9302	258	5	5881	153	606	6	0	6059	1486	153	-40	39563
	13.2%	32.4%	1.9%	40.0%	6.6%	-18.3%	2.3%	50.0%	0.0%	-15.2%	9.9%	11.1%	87.5%	12.0%
8/81	19950	12679	224	7	6318	125	620	9	0	5131	1661	165	-20	46869
8/80	16966	9763	256	6	5872	153	469	7	0	5495	1490	153	15	40645
	17.6%	29.9%	-12.5%	16.7%	7.6%	-18.3%	32.2%	28.6%	0.0%	-6.6%	11.5%	7.8%	-233.3%	15.3%
9/81	20546	14722	255	34	6402	146	600	13	0	5132	1789	165	-41	49763
9/80	17828	11432	247	15	5692	140	589	7	0	5694	1603	160	46	43453
	15.2%	28.8%	3.2%	126.7%	12.5%	4.3%	1.9%	85.7%	0.0%	-9.9%	11.6%	3.1%	-189.1%	14.5%
10/81	31933	20149	264	100	6899	140	600	19	0	5142	2455	170	-91	67781
10/80	34424	22302	245	27	6375	157	670	18	0	5792	2202	257	309	72778
	-7.2%	-9.7%	7.8%	270.4%	8.2%	-10.8%	-10.4%	5.6%	0.0%	-11.2%	11.5%	-33.9%	-129.4%	-6.9%
11/81	45791	11837	189	56	7280	0	600	28	0	5342	3290	11412	-80	85745
11/80	47634	13193	204	72	6239	154	535	30	0	5233	3189	12230	-166	88547
	-3.9%	-10.3%	-7.4%	-22.2%	16.7%	-100.0%	12.1%	-6.7%	0.0%	2.1%	3.2%	-6.7%	51.8%	-3.2%
12/81	63984	16996	147	58	7528	124	620	44	0	5343	4327	17240	-35	116376
12/80	62925	23542	158	85	6709	158	617	40	0	5276	4140	13714	109	117473
	1.7%	-27.8%	-7.0%	-31.8%	12.2%	-21.5%	0.5%	10.0%	0.0%	1.3%	4.5%	25.7%	-132.1%	-0.9%
1/82	76575	22851	106	77	7532	140	605	48	0	5267	4630	16844	-25	134650
1/81	76835	28123	102	150	6748	135	656	50	0	5183	4388	16803	226	139399
	-0.3%	-18.7%	3.9%	-48.7%	11.6%	3.7%	-7.8%	-4.0%	0.0%	1.6%	5.5%	0.2%	-111.1%	-3.4%
2/82	62773	24765	120	84	6801	127	555	39	0	5264	4376	10675	55	115634
2/81	60298	22211	132	93	5924	124	574	38	0	4512	4045	10140	-61	108030
	4.1%	11.5%	-9.1%	-9.7%	14.8%	2.4%	-3.3%	2.6%	0.0%	16.7%	8.2%	5.3%	190.2%	7.0%
3/82	53325	19582	183	93	7525	150	610	35	0	5286	3970	9645	30	100934
3/81	52170	20720	175	79	6368	150	622	32	0	4991	3752	9136	-250	98145
	2.8%	-5.5%	4.6%	17.7%	18.2%	0.0%	-1.9%	9.4%	0.0%	5.9%	5.8%	5.6%	112.0%	2.8%
4/82	38944	24486	242	75	6743	150	600	22	0	5161	3187	585	10	80205
4/81	30305	22264	227	48	5841	136	570	14	0	5254	2711	674	-178	67946
	28.2%	10.0%	6.6%	56.3%	15.4%	10.3%	5.3%	57.1%	0.0%	-1.8%	17.6%	-13.2%	105.6%	18.0%
5/82	27355	19653	264	55	6675	150	620	14	0	5131	2273	230	-10	62410
5/81	27604	17894	241	36	6092	137	614	13	0	4868	2003	425	64	59991
	-0.9%	9.8%	9.5%	52.8%	9.6%	9.5%	1.0%	7.7%	0.0%	5.4%	13.5%	-45.9%	-115.6%	4.0%
SUMMER TOTAL														
	178924	118916	1707	285	45511	986	4260	93	0	36186	14634	1650	-142	403011
	160034	105545	1733	142	41320	1025	4064	71	0	38676	13130	1964	99	367803
	11.8%	12.7%	-1.5%	100.7%	10.1%	-3.8%	4.8%	31.0%	0.0%	-6.4%	11.5%	-16.0%	-243.4%	9.6%
WINTER TOTAL														
	302948	96031	745	368	36666	541	2990	194	0	26502	20593	65816	-55	553339
	300062	107789	771	479	31988	721	3004	190	0	25195	19514	62023	-142	551594
	1.0%	-10.9%	-3.4%	-23.2%	14.6%	-25.0%	-0.5%	2.1%	0.0%	5.2%	5.5%	6.1%	61.3%	0.3%
YEAR TOTAL														
	481872	214947	2452	653	82177	1527	7250	287	0	62688	35227	67466	-197	956350
	460096	213334	2504	621	73308	1746	7068	261	0	63871	32644	63987	-43	919397
	4.7%	0.8%	-2.1%	5.2%	12.1%	-12.5%	2.6%	10.0%	0.0%	-1.9%	7.9%	5.4%	-358.1%	4.0%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

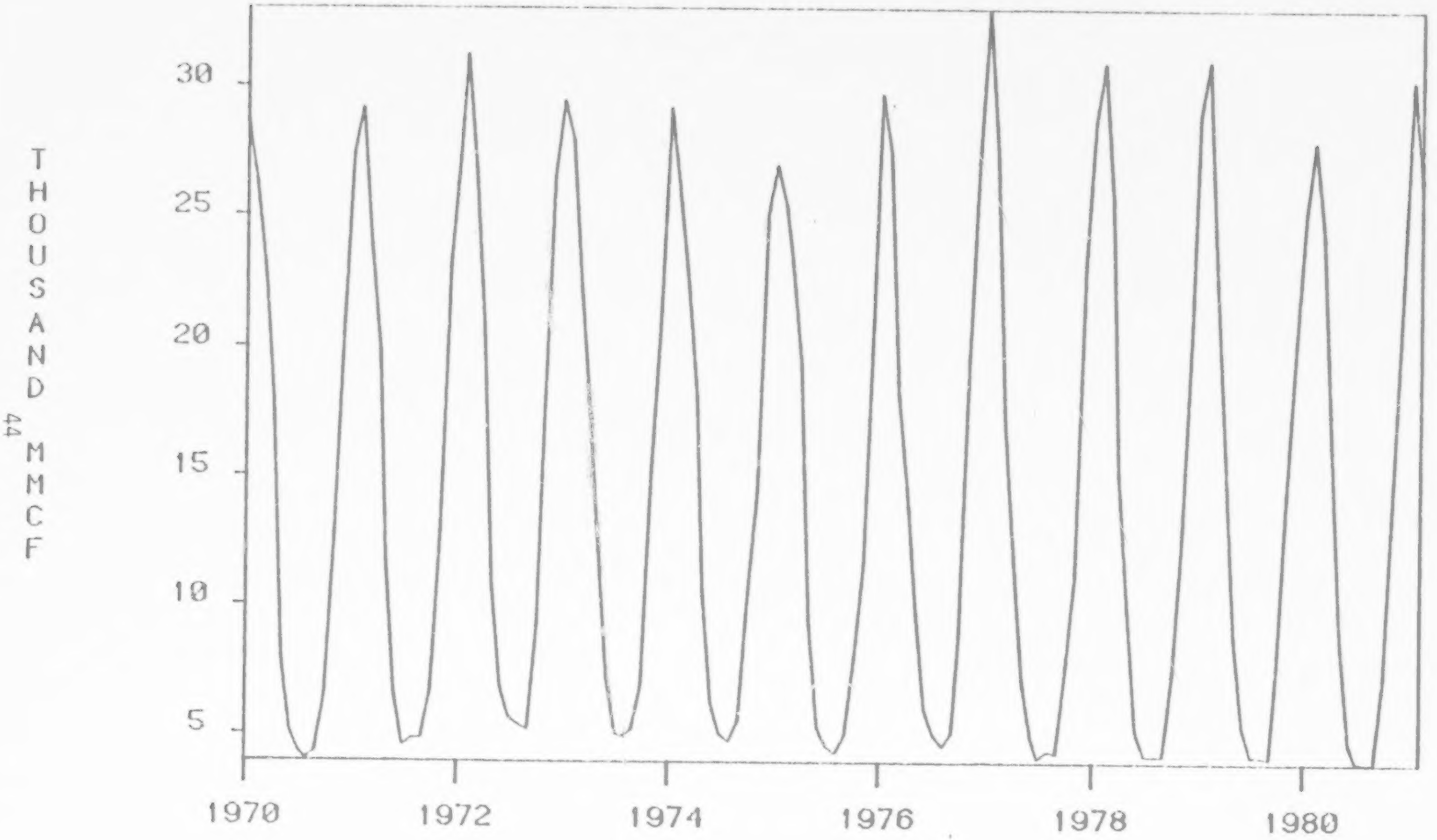
(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

FIGURE 11 MONTHLY OHIO RESIDENTIAL NATURAL GAS CONSUMPTION
JANUARY 1970 - FEBRUARY 1981



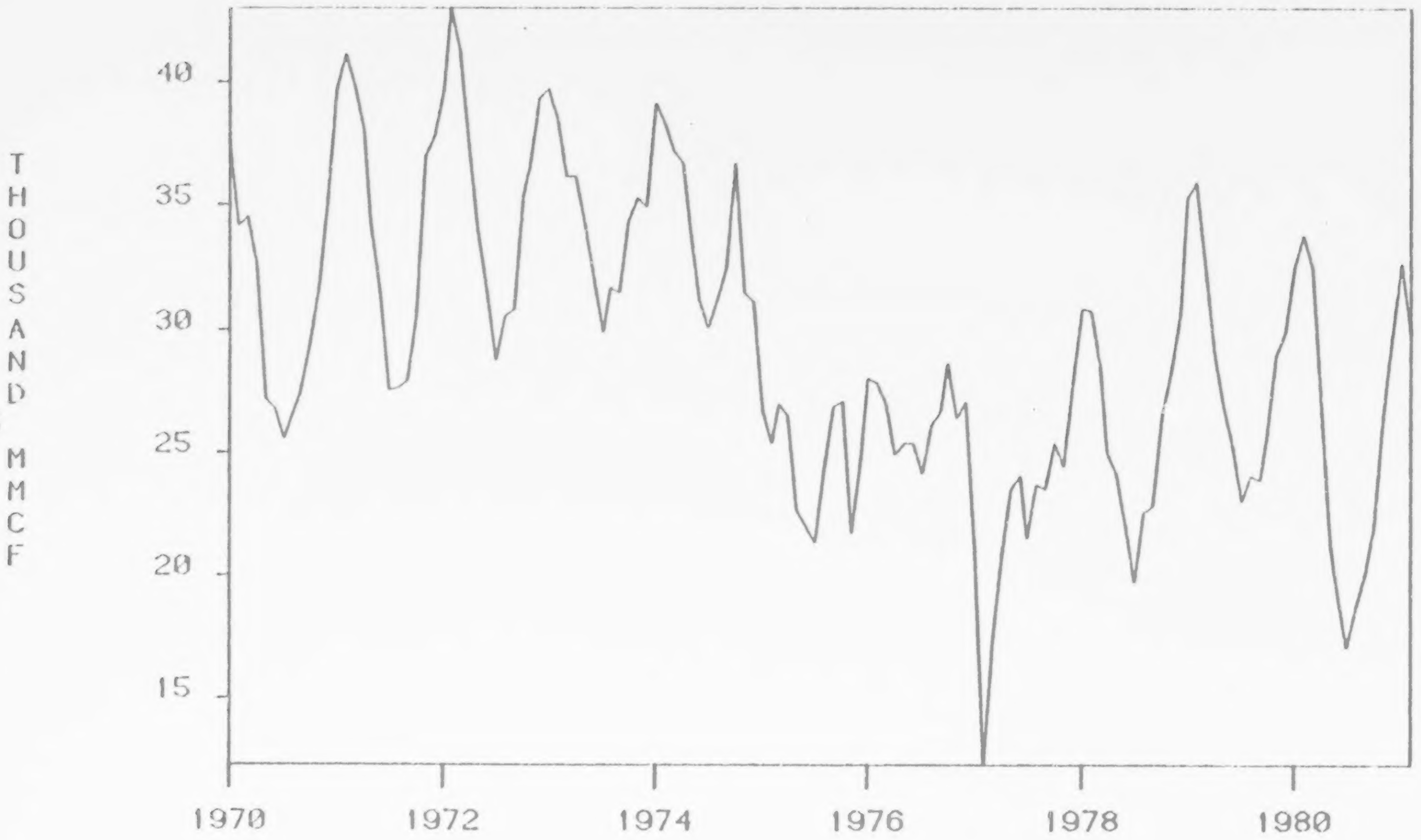
SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 12 MONTHLY OHIO COMMERCIAL NATURAL GAS CONSUMPTION
JANUARY 1970 - FEBRUARY 1981



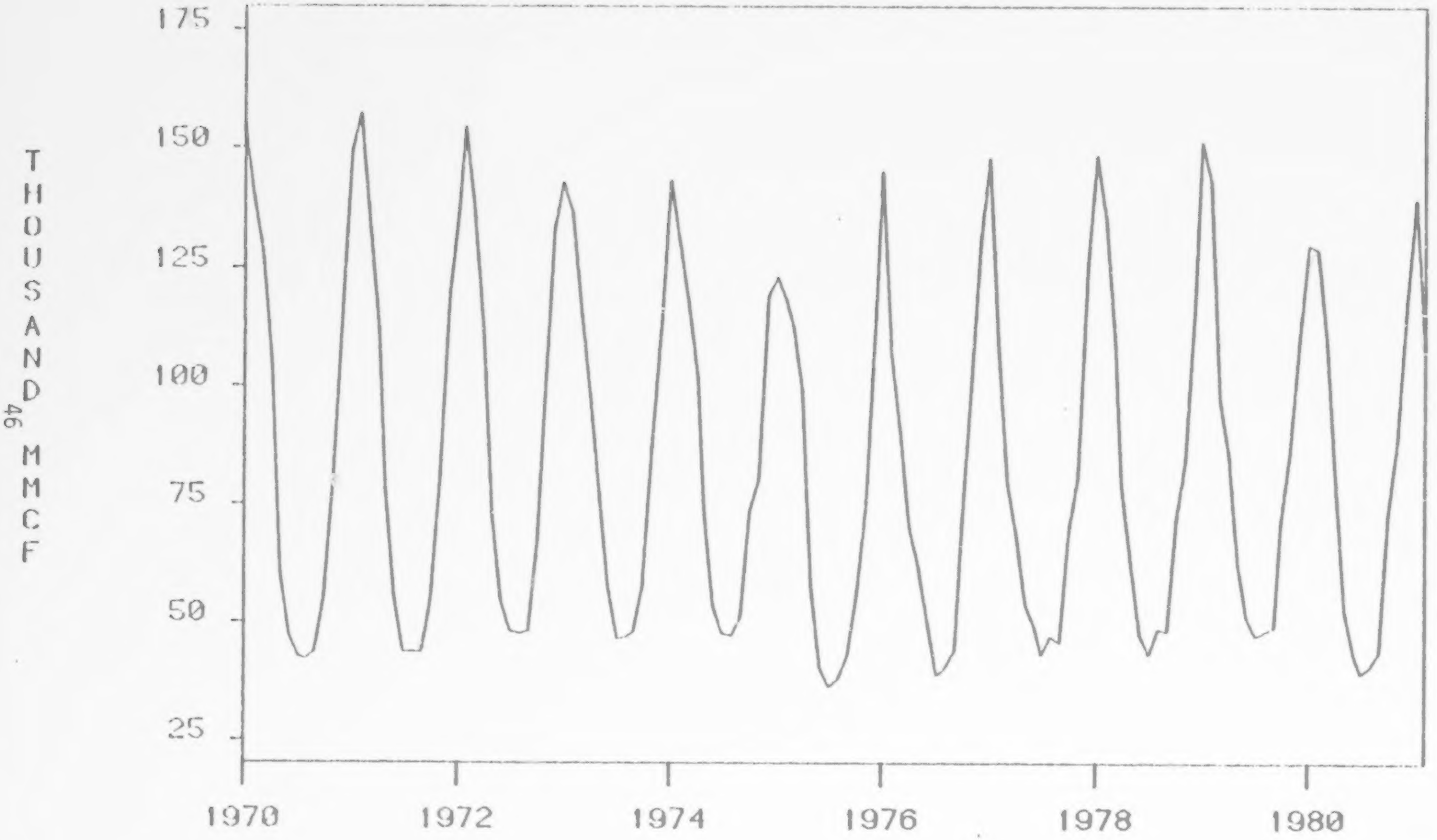
SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 13 MONTHLY OHIO INDUSTRIAL NATURAL GAS CONSUMPTION
JANUARY 1970 - FEBRUARY 1981



SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 14. MONTHLY OHIO TOTAL NATURAL GAS CONSUMPTION
JANUARY 1970 - FEBRUARY 1981



SOURCE: OHIO DEPARTMENT OF ENERGY

cooling season. The contrast between the natural gas consumption levels during the heating as opposed to the non-heating seasons has increased over the past two years. The effects of curtailments enforced on the industrial sector during the 1976-77 heating season is dramatically shown in Figure 13.

Since natural gas is the primary source of space heating for the residential and commercial sectors, over 60 percent of the natural gas consumed in Ohio is used during the heating season. Table 11 shows the actual aggregate monthly requirements for the eight major utilities, between June 1980 and May 1981, along with the utilities' consolidated projections for the forth- coming twelve months. Figure 15 is a graphic representation of the utilities' consolidated sectoral projections for the forthcoming twelve months.

Actual levels of sectoral requirements within individual utility service areas, for the past two years, are presented in Appendix B, Tables B-9 through B-16.

Historical Behavior of Annual Sectoral Requirements

In Figures 16-21 we have presented the annual sectoral natural gas consumption patterns observed in Ohio between 1960 and 1980. In Figure 22 we have indicated the relative shares of residential, commercial, industrial, and the combined electric utilities and transportation sectors in the Ohio total.

Quantitative analyses of the possible determinants of the consumption patterns observed in Figures 16-22 are continuing, in house, at the ODOE. Certain general comments can, nevertheless, be made at this time concerning the dramatic contrasts in the prevailing sectoral consumption trends in the sixties, as opposed to the corresponding trends in the seventies and the eighties.

Table 11. Comparison Between One Year of Actual and Forecast Demand
for Eight Major Ohio Gas Utilities by Sector
(MMCF)

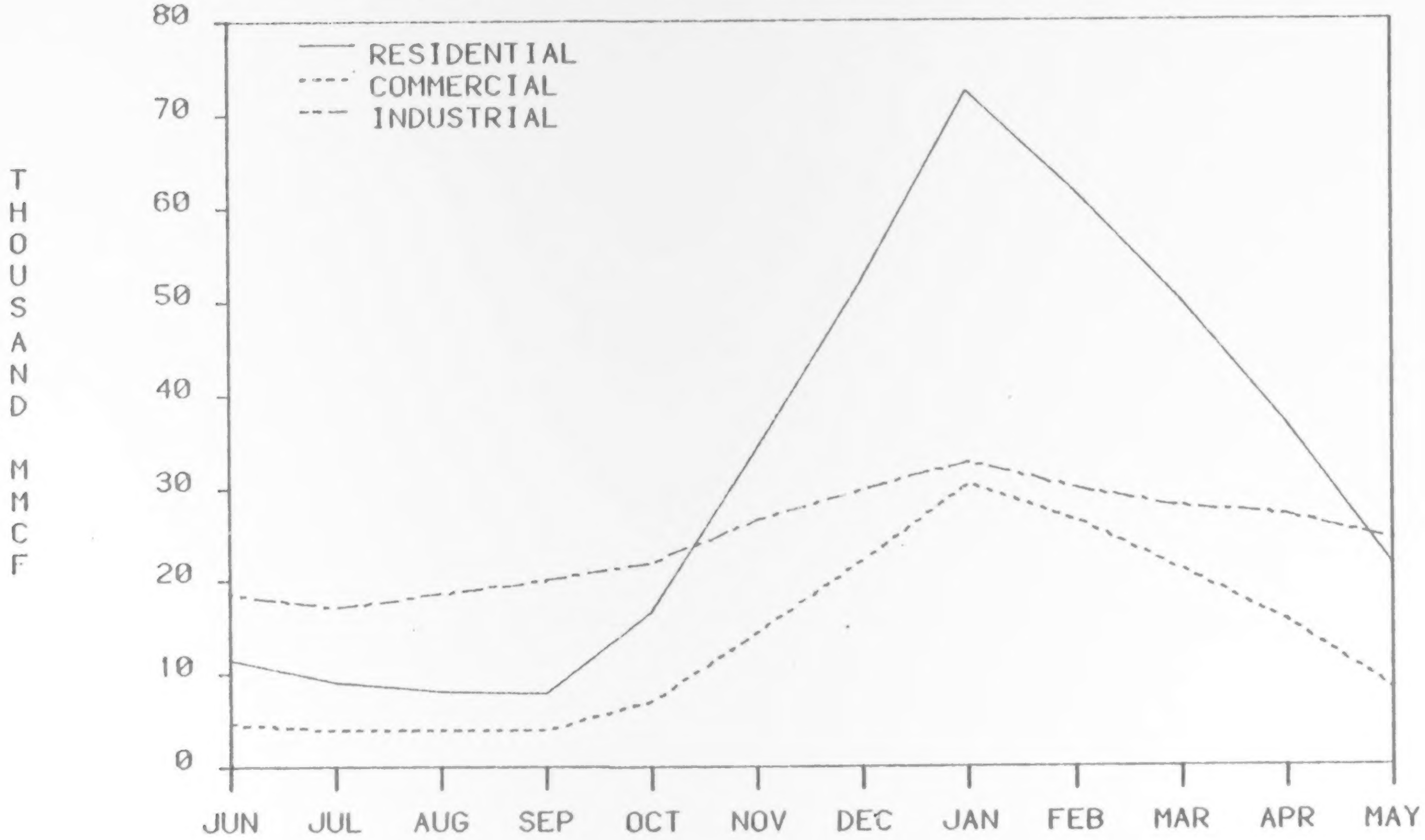
MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
6/81	30	12883	5424	25485	-2627	9902	51067	-603
6/80	29	11608	4711	18673	-1257	9692	43427	0
	3.4%	11.0%	15.1%	36.5%	-109.0%	2.2%	17.6%	999.9%
7/81	5	9024	4219	20712	169	9677	43301	-512
7/80	5	9145	4036	17120	145	9117	39563	0
	0.0%	-1.3%	4.5%	21.0%	16.6%	6.1%	10.7%	999.9%
8/81	11	8745	4098	22824	1730	8992	46389	-480
8/80	11	8181	3892	18712	1099	8761	40645	0
	0.0%	6.9%	5.3%	22.0%	57.4%	2.6%	14.1%	999.9%
9/81	87	9664	4429	23457	2822	8690	49062	-701
9/80	87	7932	3958	20022	3028	8513	43453	0
	0.0%	21.8%	11.9%	17.2%	-6.8%	2.1%	12.9%	999.9%
10/81	334	16603	7101	25273	11017	7023	67017	-764
10/80	324	16794	7185	22027	17181	9591	72778	0
	0.0%	-1.1%	-1.2%	14.7%	-35.9%	-26.8%	-7.9%	999.9%
11/81	690	31868	13590	27159	11860	0	84485	-1260
11/80	686	33960	14548	26501	13483	55	88547	0
	0.6%	-6.2%	-6.5%	2.5%	-12.0%	-100.0%	-4.6%	999.9%
12/81	1052	52300	22208	29171	11528	0	115207	-1169
12/80	1028	52156	22197	29781	13322	17	117473	0
	2.3%	0.3%	0.0%	-2.0%	-13.5%	-100.0%	-1.9%	999.9%
1/82	1141	65475	27643	31661	7467	1326	133572	-1078
1/81	1124	72449	30341	32697	3907	5	139399	0
	1.5%	-9.6%	-8.9%	-3.2%	91.1%	26420.0%	-4.2%	999.9%
2/82	980	60991	25790	31716	-5308	1326	114515	-1119
2/81	977	61561	26455	29857	-6486	-3357	108030	0
	0.3%	-0.9%	-2.5%	6.2%	18.2%	139.5%	6.0%	999.9%
3/82	823	52424	22241	29787	-4979	0	99473	-1461
3/81	814	49886	21190	27930	-996	135	98145	0
	1.1%	5.1%	5.0%	6.6%	-399.9%	-100.0%	1.4%	999.9%
4/82	735	36780	15670	27041	-8714	8308	79085	-1120
4/81	455	30965	12834	24867	-6393	5673	67946	0
	61.5%	18.8%	22.1%	8.7%	-36.3%	46.4%	16.4%	999.9%
5/82	202	21187	9043	25118	-4230	10437	61555	-855
5/81	196	21548	8532	24330	-3992	9573	59991	0
	3.1%	-1.7%	6.0%	3.2%	-6.0%	9.0%	2.6%	999.9%
SUMMER TOTAL	1404	114886	49984	169910	167	63029	397976	-5035
	1117	106173	45148	145751	9811	60920	367803	0
	25.7%	8.2%	10.7%	16.6%	-98.3%	3.5%	8.2%	999.9%
WINTER TOTAL	4686	263058	111480	149494	20568	2652	547252	-6087
	4629	270012	114731	146766	23230	-3145	551594	0
	1.2%	-2.6%	-2.8%	1.9%	-11.5%	184.3%	-0.8%	999.9%
YEAR TOTAL	6090	377944	161464	319404	20735	65681	945228	-11122
	5746	376185	159879	292517	33041	57775	919397	0
	6.0%	0.5%	1.0%	9.2%	-37.2%	13.7%	2.8%	999.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

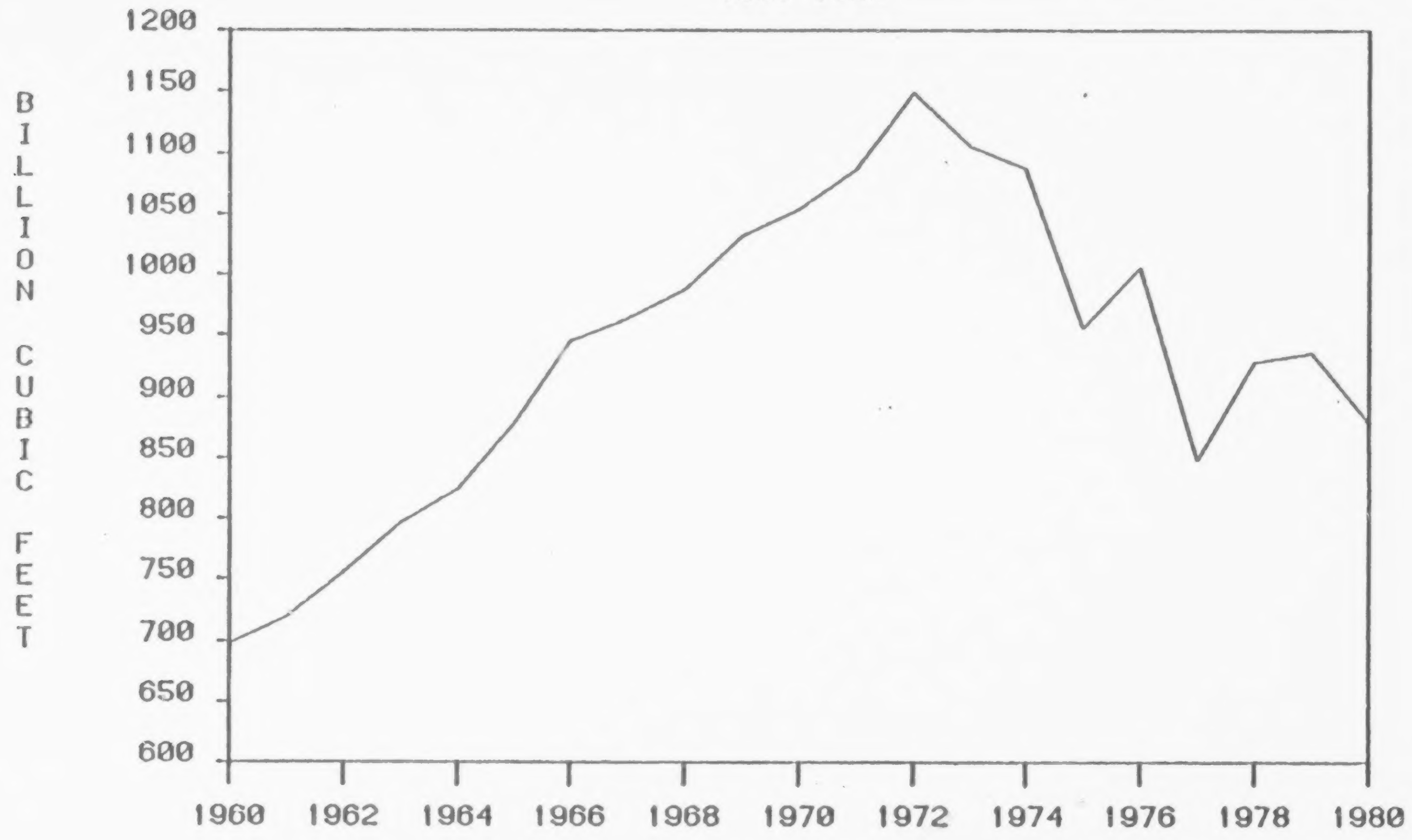
(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

FIGURE 15. PROJECTED GAS REQUIREMENTS FOR OHIO BY SECTOR
EIGHT MAJOR COMPANIES (JUNE 1980 - MAY 1981)



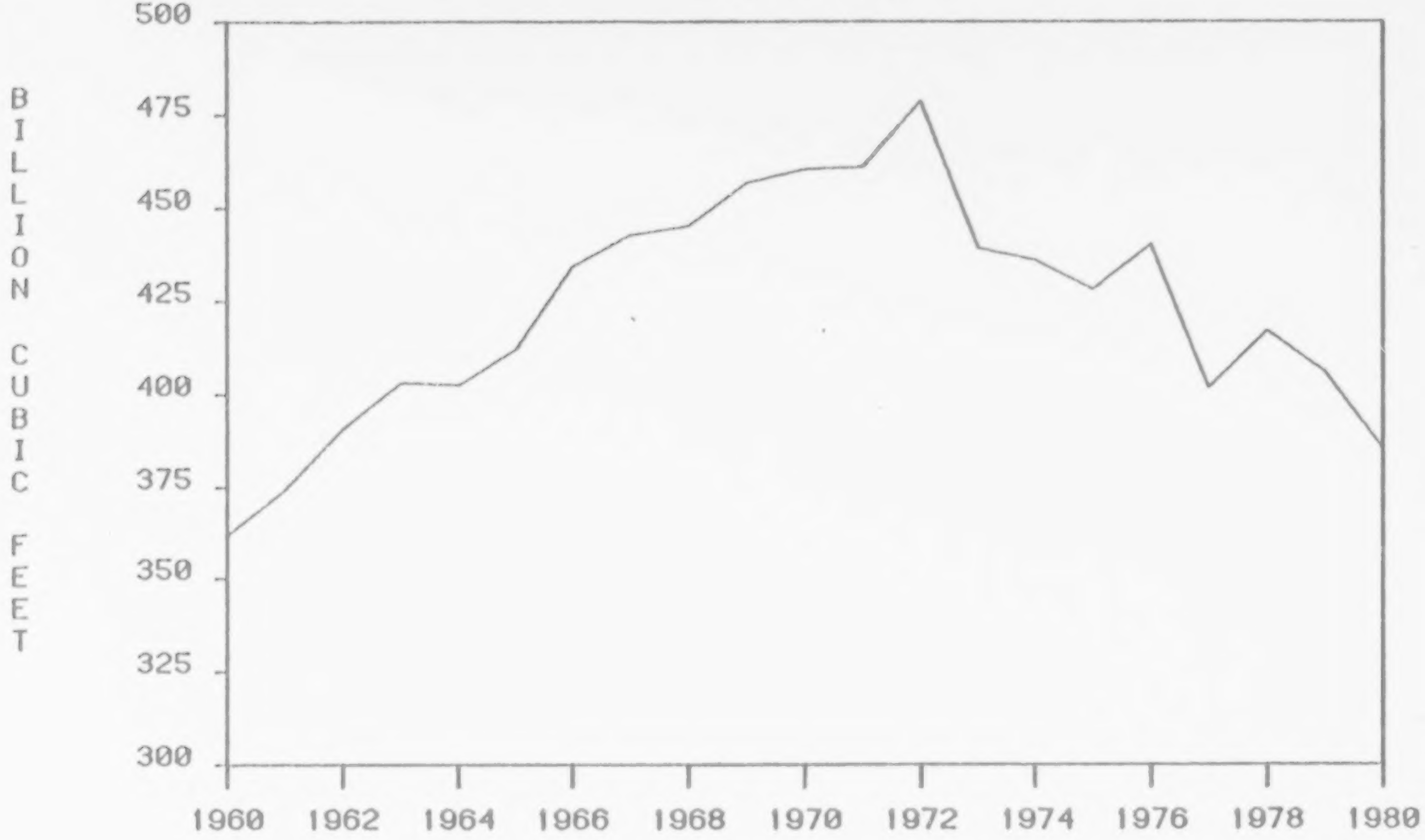
SOURCE: MONTHLY PROJECTIONS OF EIGHT MAJOR GAS UTILITIES AND
THE OHIO DEPARTMENT OF ENERGY

FIGURE 16. OHIO TOTAL NATURAL GAS CONSUMPTION
1960-1980



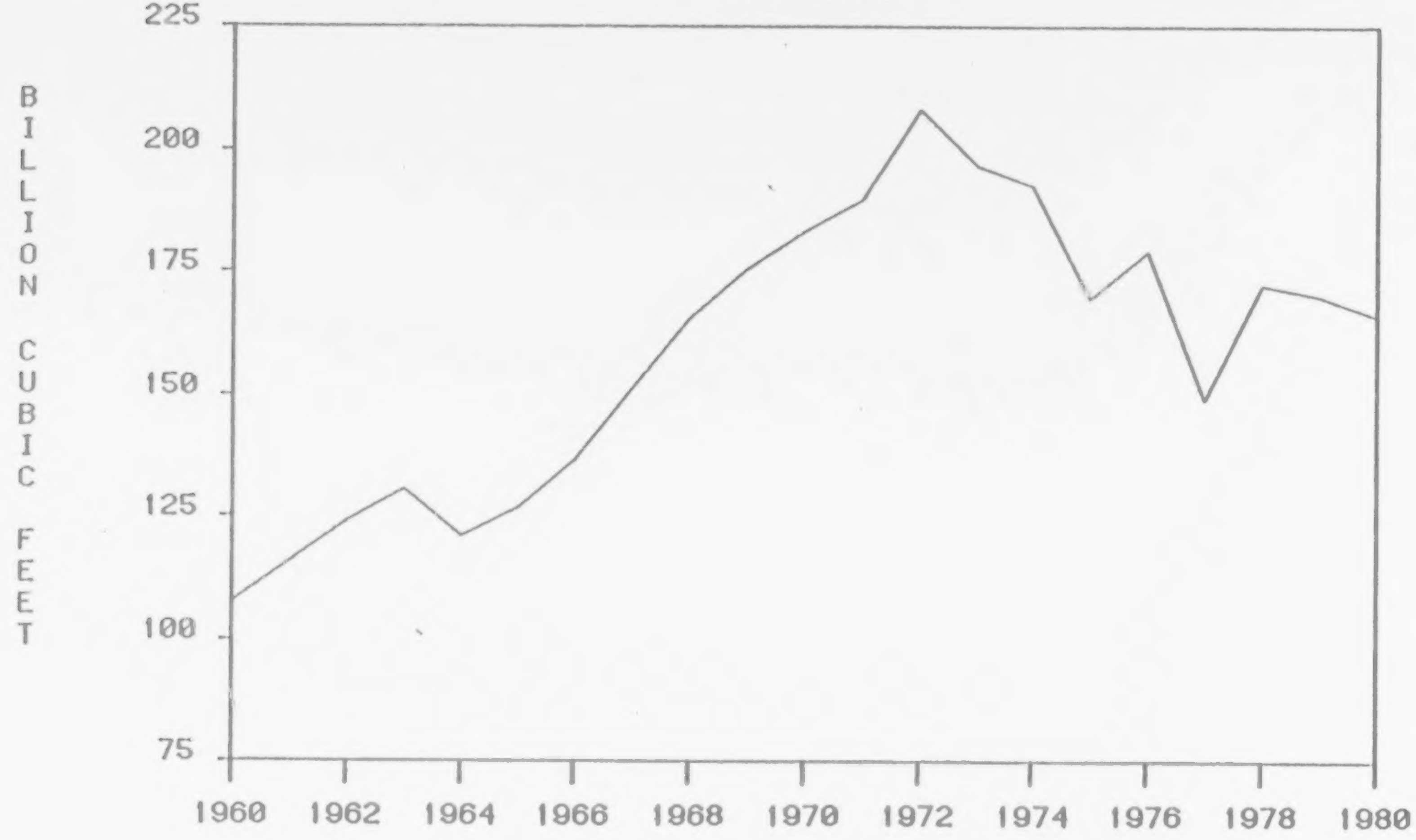
SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 17. OHIO RESIDENTIAL NATURAL GAS CONSUMPTION
1960-1980



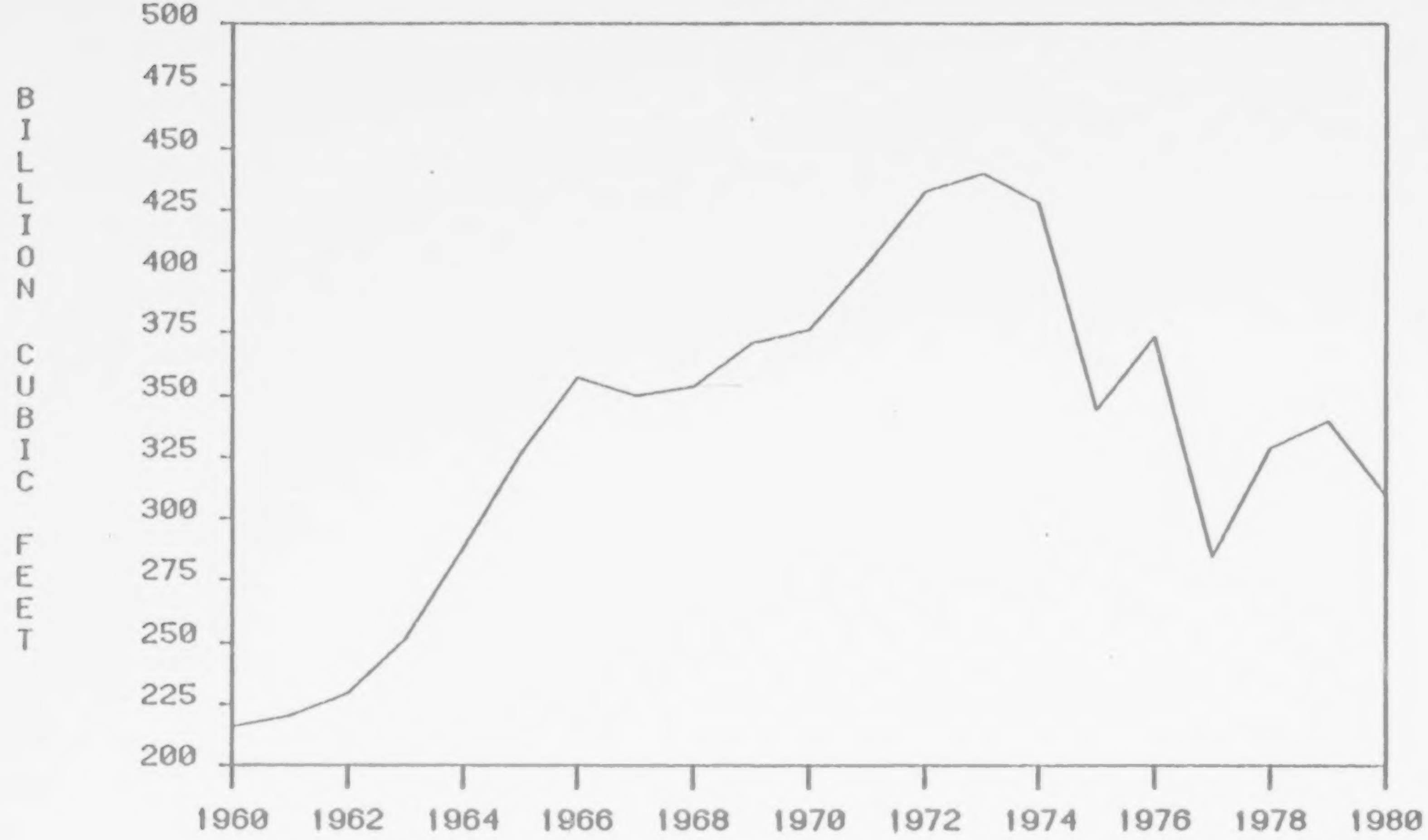
SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 18. OHIO COMMERCIAL NATURAL GAS CONSUMPTION
1960-1980



SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 19. OHIO INDUSTRIAL NATURAL GAS CONSUMPTION
1960-1980



SOURCE: OHIO DEPARTMENT OF ENERGY

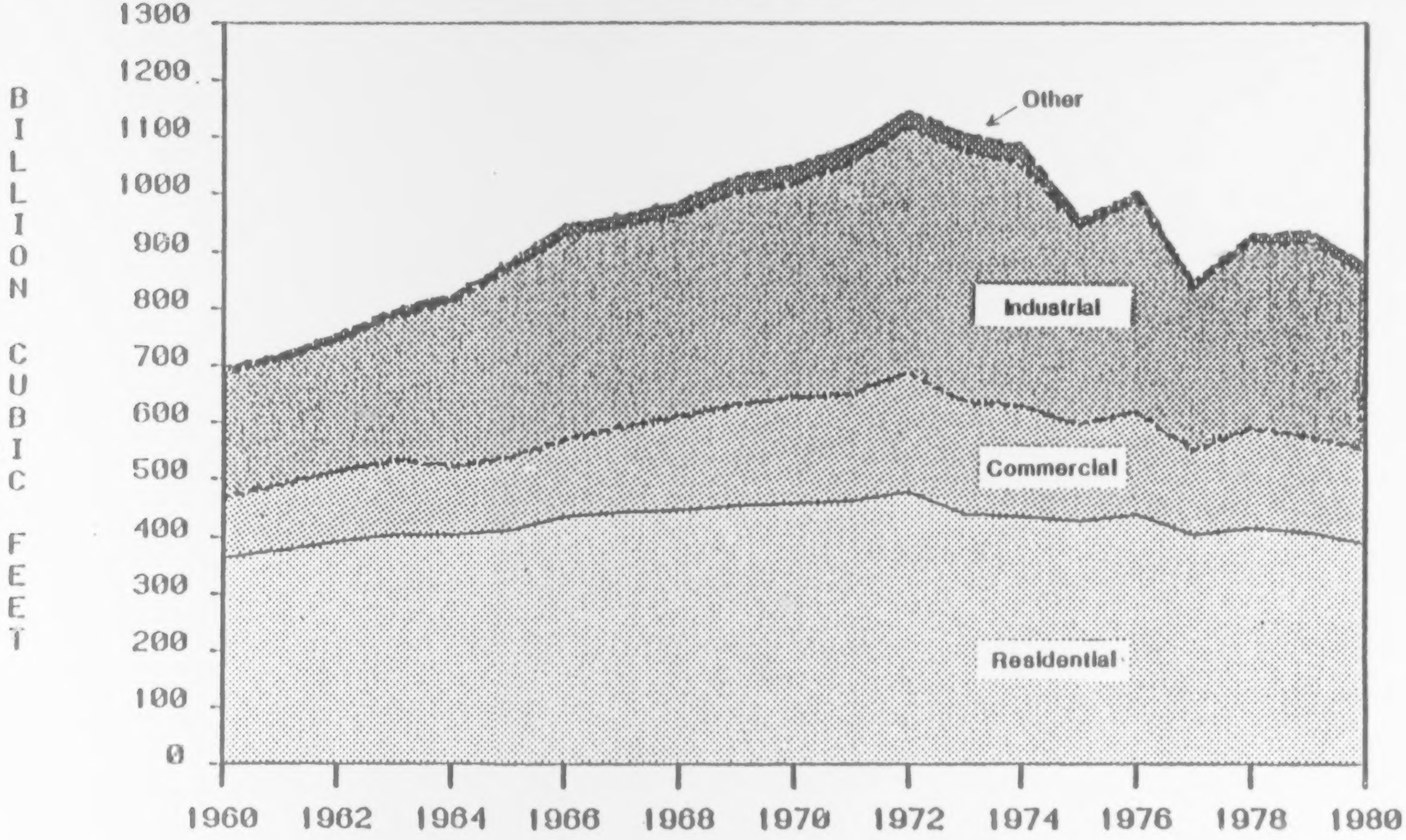
FIGURE 20. OHIO TRANSPORTATION NATURAL GAS CONSUMPTION
1960-1980

SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 21. OHIO ELECTRIC UTILITY NATURAL GAS CONSUMPTION
1960-1980

SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 22. OHIO NATURAL GAS CONSUMPTION BY SECTOR
1960-1980



NOTE: "OTHER" INCLUDES TRANSPORTATION AND ELECTRIC UTILITY CONSUMPTION

SOURCE: OHIO DEPARTMENT OF ENERGY

With the breakdown of the Bretton Woods International Monetary System in 1971, which eventually led to a one hundred percent depreciation in the U.S. dollar, and the OPEC price hikes of 1973, which permanently altered the structure of costs and expenditures in all sectors of the economy, there grew a gap between the opportunity cost of natural gas as determined in international, or interstate trade, and the federally regulated wellhead price for interstate commerce. As a result of this discrepancy, supplies of natural gas for interstate commerce continuously declined between 1973 and 1977.

Consequently, states such as Ohio, which depend on interstate natural gas as their major source of supply, suffered from natural gas shortages during this period in the sense that, at the prevailing price of natural gas, supplies were not sufficient to satisfy all prospective customers. In anticipation of this situation Ohio natural gas utilities applied for and were granted a ban on new customer hookups in 1972. This ban stayed in effect until the passage of the Natural Gas Policy Act of 1978.

Historical Behavior of Industrial Requirements

As a result of the reduction in aforementioned interstate supplies, base allocations of lower priority industrial and commercial customers were curtailed between 1973-1977, which led to extensive conservation in the industrial sector, and to fuel switching.

It was hoped that with the passage of the Natural Gas Policy Act of 1978, which decontrolled some natural gas prices immediately, and which foresees the decontrol of all natural gas prices by 1985, availability of natural gas supplies to Ohio customers in general, and to Ohio industrial customers, in particular, would be enhanced. Since the ban on new customer hookups has been lifted from all Ohio utilities, there is no

question that the "unavailability" of supplies is not the reason why industrial requirements have declined in 1980. Rather, in contradistinction with the sixties, the severe recessions of 1974-75, and 1980-81 have, also, taken their toll in reducing the level of economic activity in general, and the industrial consumption of natural gas, in particular.

It is anticipated that as the economy recovers from the current recession, natural gas will still be a preferred fuel for industrial consumption, as long as its price per Btu is competitive with the per Btu price of heating oil.

Historical Behaviors of Residential and Commercial Requirements

Although no new customer hookups were allowed between 1972 and 1978-79, the number of residential customers in Ohio has remained the same, for all practical purposes, during this period. However, the weather sensitivity of residential consumption during the same period of time, measured in terms of the change in the monthly volume of residential requirements in MMCF per degree day change per month, has been declining in the service areas of the four major Ohio natural gas utilities, as presented in Table 12. This fact is a clear reflection of the effectiveness of residential conservation measures implemented in Ohio, by ODOE and others.

There is no doubt that the major incentive for conservation in all sectors of the economy is the fact that the increases in energy costs between 1972 and 1980, eight-fold in the cost of imported oil and four-fold in Ohio natural gas prices, as indicated in Table 19, have been far ahead of any increases in real per capita income. So much so that maintenance of discretionary expenditures on non-energy items has

Table 12. Weather Sensitivity of Residential Natural Gas Consumption in Ohio (1970-1980)

MMCF/Per Heating Degree-Day

Year	Cincinnati Gas and Electric	Columbia Gas	Dayton Power and Light	East Ohio Gas
1970	6.43	21.64	5.69	22.95
1971	6.96	24.04	6.04	23.57
1972	6.95	23.81	5.77	24.22
1973	6.78	23.68	5.72	23.04
1974	6.76	23.35	5.58	24.21
1975	6.83	22.73	5.61	24.34
1976	6.34	21.22	5.04	22.52
1977	5.15	18.95	4.79	20.44
1978	5.11	18.00	4.54	19.74
1979	5.10	18.48	4.53	20.68
1980	4.77	17.91	4.28	19.26

Source: O.S.U. Gas Model, monthly reports of four Ohio gas utilities and the Ohio Department of Energy.

required severe reductions in the levels of energy consumption by residential, commercial, and industrial customers, in the U.S. in general, and in Ohio, in particular.

The Ohio Department of Energy has been instrumental in increasing the awareness of the public opinion in Ohio about the availability, and implementation of efficient, feasible, and practical conservation measures. ODOE's leadership in providing prudent programs and services aimed to reduce the information and implementation costs to individual customers of the above mentioned types of conservation measures is one reason why conservation efforts in all sectors of Ohio have been much more successful then the national average throughout 1980. We expect 1981 to be an even better year than 1980 in terms of translating the public's need to conserve into effectual conservation.

In view of these considerations, dramatic changes in the behaviors of residential and commercial natural gas requirements are not expected in the near future merely because natural gas supplies have become more abundant. We expect residential and commercial requirements to stabilize around their 1978 or 1979 levels as the economy recovers from the current recession. Major climatic changes, such as a repeat of the winter of 1976, may create temporary increases in residential or commercial demands; but unless, and until, the share of energy expenditures in household budgets are reduced back to 1972 levels through dramatic increases in real per capita incomes, the attainment of 1972 levels of natural gas consumption does not seem to be a likely possibility in the near future.

Alternate Fuel Capability Profile

There were no natural gas curtailments in the June 1980 - May 1981 annual period, and neither the reporting Ohio gas utilities nor the gas pipeline companies projected any curtailments for the June 1981 - May 1982 period. Hence, there is no alternate fuel capability profile to be presented at this time.

Twelve - Month Outlook

On the basis of projected natural gas supplies, and the historically established trends in natural gas requirements, the outlook for the next twelve months indicates no shortages under normal or 10 percent colder than normal weather conditions.

Utility Forecasts

Utility forecasts for the next twelve months project no deficiencies for Ohio under normal or 10 percent colder than normal weather conditions. Aggregate supply and demand projections of the eight major utilities, as presented in Table 13 and Figure 23, indicate a 1.2 percent annual surplus of natural gas supplies over demand. All eight utilities project supply to be in excess of demand during the 1981-82 heating season. Supply and demand projections of the individual utilities, as submitted in their "Monthly Reports of Supply and Demand of Natural Gas", are summarized in Appendix B, Table B-17.

Independent Forecast

The law which created the Ohio Department of Energy requires the development of independent ODOE forecasting capability within the department and the preparation of independent forecasts. Independent natural gas demand forecasts based on two alternate methodologies have been developed by ODOE for the eight major gas utilities serving Ohio.

The first methodology employs regression analysis to forecast demand for each major utility as a function of the normal and 10 percent colder than normal temperature scenarios on the basis of the most recent ODOE Form SG-2's submitted by the respective utilities. The second methodology employed by the ODOE to forecast natural gas demand in each major utility service area is based upon Box-Jenkins type time series models of monthly natural gas requirements of the respective utilities between January 1970 and May 1981. Such models when properly identified yield projections that possess desirable statistical properties and are deemed to be as accurate as, or more accurate than, alternative short-term forecasting techniques. They also have the added flexibility of yielding updated forecasts every time the most recent actual monthly requirements are reported to ODOE. The use of alternative methodologies is expected to provide a double check and reduce forecasting error, and thus, lead to a more accurate and decisive diagnosis of impending shortages.

The results obtained on the basis of both methodologies are presented in Tables 14 through 18. It can be concluded from these tables that no shortages or curtailments of natural gas are expected during the 1981-82 heating season.

Table 13. Projected Aggregate Supply and Demand for Natural Gas for Eight Major Gas Utilities
June 1981 - May 1982
(MMCF)

Month/Year	6/81	7/81	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	Summer Totals	Winter Totals	Annual Totals
Supply	51,670	44,313	46,869	49,763	67,781	85,745	116,376	134,650	115,634	100,934	80,205	62,410	403,011	553,339	956,350
Demand	51,067	43,801	46,389	49,062	67,017	84,485	115,207	133,572	114,515	99,473	79,085	61,555	397,976	547,252	945,228
Deficiency	-603	-512	-480	-701	-764	-1,260	-1,169	-1,078	-1,119	-1,461	-1,120	-855	-5,035	-6,087	-11,121
Percent Deficiency	-1.2	-1.2	-1.0	-1.4	-1.1	-1.5	-1.0	-0.8	-1.0	-1.4	-1.4	-1.4	-1.2	-1.1	-1.2

Note: A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.

Source: ODOE Form SG-1 of eight major gas utilities and the Ohio Department of Energy.

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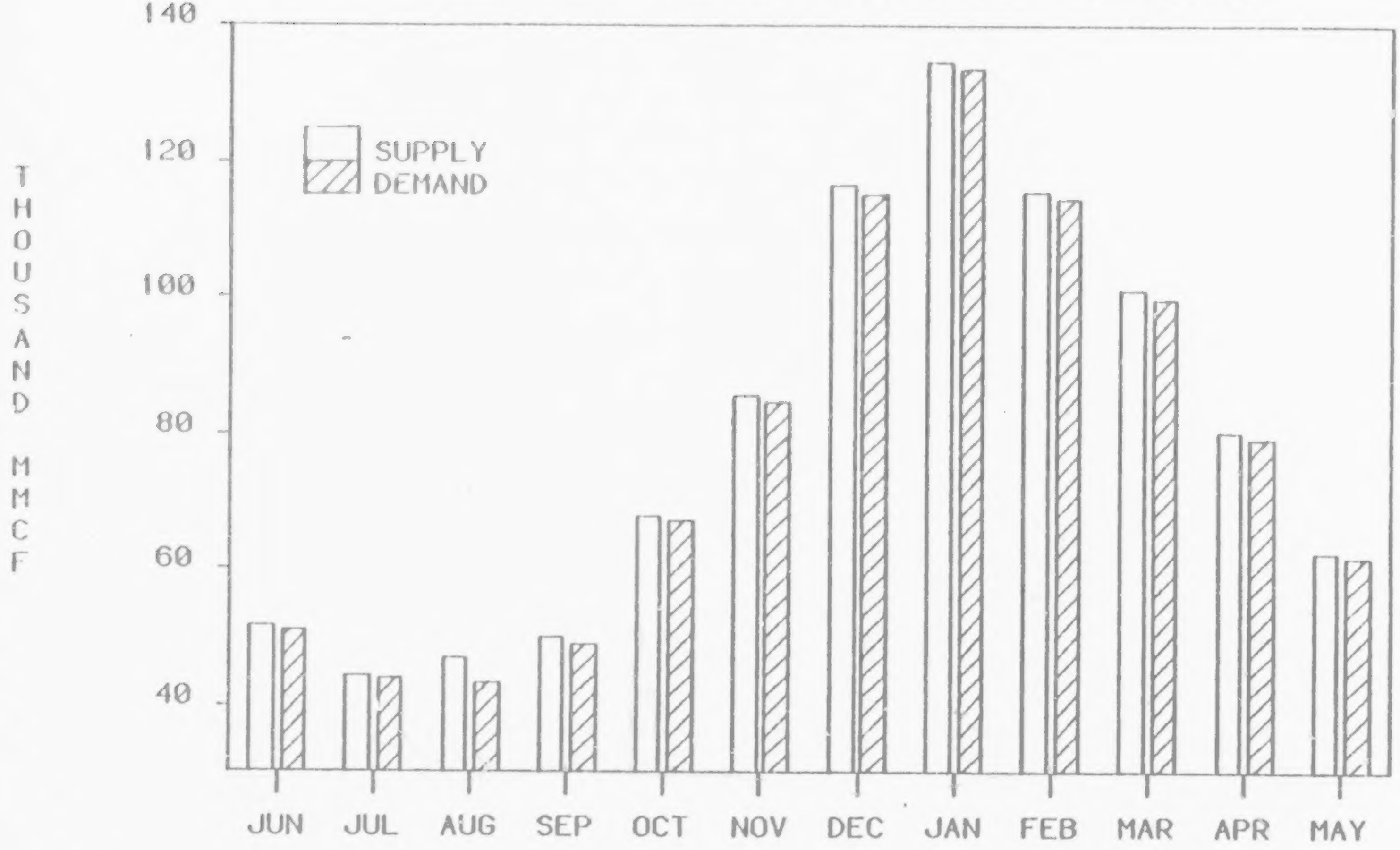
FIG. 23. PROJECTED SUPPLY AND DEMAND OF NATURAL GAS FOR OHIO
EIGHT MAJOR COMPANIES (JUNE 1981 - MAY 1982)



SOURCE: MONTHLY PROJECTIONS OF EIGHT MAJOR GAS UTILITIES AND THE OHIO DEPARTMENT OF ENERGY

Table 14. Independent Forecasts of Natural Gas Supply and Demand for the Eight Major Ohio Gas Utilities
November 1981 - March 1982
(MMCF)

	Normal Weather			10% Colder Than Normal			10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	Demand	Deficiency	Supply	Demand	Deficiency	Supply	Demand	Deficiency
Cincinnati Gas & Electric	57,699	56,492	-1,207	61,414	60,667	-747	61,414	60,924	-490
Columbia Gas	218,134	202,863	-15,271	230,923	216,369	-14,554	230,923	219,373	-11,550
Dayton Power & Light	38,279	38,650	371	41,309	41,707	398	41,309	43,122	1,813
East Ohio Gas	207,988	208,764	776	219,741	219,658	-83	219,741	225,541	5,800
National Gas	7,075	5,625	-1,450	7,075	5,802	-1,273	7,075	5,802	-1,273
Ohio Gas	9,755	4,789	-4,966	9,755	5,144	-4,611	9,755	5,144	-4,611
River Gas	2,948	2,948	0	3,105	3,105	0	3,105	3,105	0
West Ohio Gas	9,252	9,252	0	9,915	9,915	0	9,915	9,915	0
Total	551,130	529,383	-21,747	583,237	562,367	-20,870	583,237	572,926	-10,311

Source: July 1, 1981, ODOE Form SG-2 of reporting utilities, and the Ohio Department of Energy.

Table 15. Independent Forecasts of Gas Supply
and Demand for Cincinnati Gas and Electric Company
November 1981 - March 1982
(MMCF)

	Normal Weather				10% Colder Than Normal Weather				10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	HDD	Demand	Deficiency	Supply	HDD	Demand	Deficiency	Supply	Demand	Deficiency
November 1981	9,393	636	9,172	-221	9,950	700	9,798	-152	9,950	8,930	-1,020
December 1981	12,990	970	12,439	-551	13,834	1,067	13,387	-447	13,834	12,992	-842
January 1982	13,289	1,051	13,231	-58	14,203	1,156	14,258	55	14,203	15,370	1,167
February 1982	11,564	888	11,637	73	12,338	977	12,507	169	12,338	12,829	491
March 1982	10,463	722	10,013	-450	11,089	794	10,717	-372	11,089	10,803	-286
Total	57,699		56,492	-1,207	61,414		60,667	-747	61,414	60,924	-490

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.

Source: Cincinnati Gas & Electric's July 1, 1981, ODOE Form SG-2, and the Ohio Department of Energy.

Table 16. Independent Forecasts of Gas Supply
and Demand for Columbia Gas of Ohio
November 1981 - March 1982
(MMCF)

	Normal Weather				10% Colder Than Normal Weather				10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	HDD	Demand	Deficiency	Supply	HDD	Demand	Deficiency	Supply	Demand	Deficiency
November 1981	33,415	570	29,881	-3,534	34,831	627	31,515	-3,316	34,831	33,788	-1,043
December 1981	46,320	951	40,808	-5,512	48,820	1,046	43,532	-5,288	48,820	45,481	-3,339
January 1982	54,204	1,173	47,175	-7,029	57,388	1,290	50,530	-6,858	57,388	54,134	-3,254
February 1982	44,774	1,102	45,138	364	47,846	1,212	48,293	447	47,846	46,962	-884
March 1982	39,421	918	39,861	440	42,038	1,010	42,499	461	42,038	39,008	-3,030
Total	218,134		202,863	-15,271	230,923		216,369	-14,554	230,923	219,373	-11,550

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.

Source: Columbia Gas of Ohio's July 1, 1981, ODOE Form SG-2, and the Ohio Department of Energy.

Table 17. Independent Forecasts of Gas Supply and Demand for Dayton Power and Light November 1981 - March 1982 (MMCF)

	Normal Weather				10% Colder Than Normal Weather				10% Colder Than Normal Weather Supply vs Time Series Projections of Demand		
	Supply	HDD	Demand	Deficiency	Supply	HDD	Demand	Deficiency	Supply	Demand	Deficiency
November 1981	5,386	482	4,934	-452	5,713	530	5,263	-450	5,713	5,847	134
December 1981	7,839	865	7,565	-274	8,431	952	8,163	-268	8,431	8,415	-16
January 1982	8,898	1,111	9,255	357	9,654	1,222	10,018	364	9,654	10,880	1,226
February 1982	9,200	1,135	9,420	220	9,976	1,249	10,203	227	9,976	10,332	356
March 1982	6,956	852	7,476	520	7,535	937	8,060	525	7,535	7,648	113
Total	38,279		38,650	371	41,309		41,707	398	41,309	43,122	1,813

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.

Source: Dayton Power and Light's July 1, 1981, ODOE Form SG-2, and the Ohio Department of Energy.

Table 18. Independent Forecasts of Gas Supply
and Demand for East Ohio Gas
November 1981 - March 1982
(MMCF)

	Normal Weather				10% Colder Than Normal Weather				10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	HDD	Demand	Deficiency	Supply	HDD	Demand	Deficiency	Supply	Demand	Deficiency
November 1981	32,697	534	32,438	-259	34,390	587	33,593	-797	34,390	35,405	1,015
December 1981	43,735	983	42,231	-1,504	46,352	1,081	44,368	-1,984	46,352	48,226	1,874
January 1982	48,849	1,197	46,898	-1,951	51,731	1,317	49,515	-2,216	51,731	55,790	4,059
February 1982	44,157	1,155	45,599	1,442	46,609	1,271	48,512	1,903	46,609	46,946	337
March 1982	38,550	954	41,598	3,048	40,659	1,049	43,670	3,011	40,659	39,174	-1,485
Total	207,988		208,764	776	219,741		219,658	83	219,741	225,541	5,800

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.

Source: East Ohio Gas Company's July 1, 1981, ODOE Form SG-2, and the Ohio Department of Energy.

Table 19. Ohio Natural Gas Prices in Current Dollars, 1970-1980 ($ Per MMBtu)

Year	Residential	Commercial	Industrial
1970	0.84	0.73	0.52
1971	0.96	0.81	0.56
1972	1.02	0.86	0.62
1973	1.08	0.94	0.65
1974	1.23	1.07	0.85
1975	1.51	1.35	1.12
1976	1.79	1.63	1.43
1977	2.23	2.07	1.95
1978	2.43	2.24	2.05
1979	2.78	2.57	2.32
1980[1]	4.23	3.50	3.06

Note: [1]1980 figures represent the first three quarters of 1980 for the east north central region of the United States.

Source: American Gas Association's Gas Facts.

Table 20. Ohio Natural Gas Prices in Constant Dollars, 1970-1980
(Dollars per MMBtu)
(1972 = 100)

Year	Residential	Commercial	Industrial
1970	0.92	0.80	0.57
1971	1.00	0.84	0.58
1972	1.02	0.86	0.62
1973	1.02	0.89	0.61
1974	1.06	0.92	0.73
1975	1.19	1.06	0.88
1976	1.34	1.22	1.07
1977	1.57	1.46	1.38
1978	1.60	1.47	1.35
1979	1.68	1.55	1.40
1980	2.38	1.97	1.72

Note: All prices are stated in terms of 1972 dollars. Unadjusted figures for 1980 represent the first three quarters of 1980 for the east north central region of the United States.

Source: Gas Facts, the American Gas Association; Statistical Abstract of the United States 1980, U.S. Department of Commerce.

APPENDIX A

FORECASTING OF ELECTRICITY DEMAND BY UTILITY

Table A-1. Allegheny Power System:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs. Actual)
July	2,483	2,623	5.6	2,547	2.6
August	2,614	2,725	4.3	2,677	2.4
September	2,453	2,607	6.3	2,514	2.5
October	2,605	2,717	4.3	2,674	2.7
November	2,674	2,709	1.3	2,700	1.0
December	2,947	3,022	2.6	2,947	0.0
January	3,205	3,226	0.7	3,159	-1.4
February	2,759	2,992	8.5	2,847	3.2
March	2,936	2,970	1.2	2,896	-1.4
April	2,483	2,698	8.7	2,580	3.9
May	2,498	2,703	8.2	2,568	2.8
June		2,603		2,499	

*Source of demand figures is FPC Form 12E-2 and Form ERA-119M. June actual figure not available.

Table A-2. American Electric Power*:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs. Actual)
July	6,091	6,230	2.3	5,813	-4.6
August	6,229	6,543	5.0	6,098	-2.1
September	5,745	6,147	7.0	5,635	-1.9
October	6,056	6,289	3.9	5,929	-2.1
November	6,368	6,552	2.9	6,172	-3.8
December	6,894	7,388	7.2	6,738	-2.3
January	7,470	8,162	9.3	7,272	-2.7
February	6,498	7,416	14.1	6,561	1.0
March	6,719	7,289	8.5	6,550	-2.5
April	5,550	6,495	17.0	5,734	3.3
May	5,628	6,401	13.7	5,600	-0.5
June		6,265		5,579	

*Does not include Columbus and Southern Ohio Electric Company. June actual figure not available.
**Source of demand figures is FPC Form 12E-2, and Form ERA-119M.

Table A-3. Cincinnati Gas and Electric:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
July	1,526	1,475	-3.4	1,485	-2.7
August	1,547	1,490	-3.7	1,502	-2.9
September	1,263	1,246	-1.4	1,282	1.5
October	1,179	1,205	2.2	1,221	3.6
November	1,209	1,249	3.3	1,243	2.8
December	1,369	1,438	5.0	1,380	0.8
January	1,463	1,559	6.6	1,479	1.1
February	1,264	1,360	7.6	1,326	4.9
March	1,290	1,313	1.8	1,320	2.3
April	1,119	1,200	7.2	1,171	4.7
May	1,169	1,276	9.2	1,217	4.1
June		1,362		1,319	

*Source of demand figures is FPC Form 12E-2. June actual figure unavailable.

Table A-4. Cleveland Electric Illuminating:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
July	1,563	1,661	6.3	1,679	7.4
August	1,633	1,668	2.2	1,703	4.3
September	1,486	1,586	6.7	1,593	7.2
October	1,527	1,615	5.8	1,617	5.9
November	1,507	1,542	2.3	1,593	5.7
December	1,615	1,685	4.3	1,671	3.5
January	1,719	1,756	2.2	1,745	1.5
February	1,553	1,544	-0.6	1,611	3.7
March	1,645	1,691	2.8	1,695	3.0
April	1,507	1,550	2.9	1,584	5.1
May	1,543	1,630	5.6	1,627	5.5
June	1,637	1,685	2.9	1,673	2.2

*Source of demand figures is FPC Form 12, Schedule 14, Column 9.

Table A-5. Columbus and Southern Ohio Electric:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
July	920	944	2.6	922	0.2
August	772	964	24.9	807	4.5
September	748	874	16.9	792	5.9
October	773	814	5.3	810	4.8
November	871	839	-3.7	895	2.8
December	951	963	1.3	964	1.4
January	825	1,046	26.8	862	4.5
February	829	929	12.1	857	3.4
March	707	896	26.7	758	7.2
April	729	831	14.0	779	6.9
May	822	805	-2.1	834	1.6
June		862		937	

*Source of demand figure is FPC Form 12E-2. June actual figure unavailable.

Table A-6. Dayton Power and Light:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
July	959	965	0.6	926	-3.4
August	972	940	-3.3	957	-1.6
September	846	837	-1.1	836	-1.2
October	855	883	3.3	853	-0.2
November	871	911	4.6	874	0.4
December	974	1,031	5.9	961	-1.3
January	1,059	1,088	2.7	1,046	-1.2
February	923	1,004	8.8	950	2.9
March	955	970	1.6	953	-0.2
April	805	861	7.0	811	0.8
May	803	857	6.7	786	-2.1
June		906		802	

*Source of demand figures is FPC Form 12E-2. June actual figure unavailable.

Table A-7. Ohio Edison System:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
July	1,998	2,124	6.3	2,021	1.2
August	2,088	2,155	3.2	2,085	-0.2
September	1,899	1,977	4.1	1,956	3.0
October	1,998	2,050	2.6	2,021	1.2
November	1,998	2,074	3.8	2,005	0.4
December	2,182	2,158	-1.1	2,139	-2.0
January	2,265	2,373	4.8	2,233	-1.4
February	2,016	2,047	1.5	2,031	0.8
March	2,163	2,164	0.1	2,117	-2.1
April	1,914	2,051	7.2	1,956	2.2
May	1,922	2,000	4.1	1,981	3.1
June		2,178		1,999	

*Source of demand figures is FPC Form 12E-2. June actual figure unavailable.

Table A-8. Ohio Valley Electric Corporation:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-81)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)
July	500	1419	183.8
August	500	1363	172.6
September	483	1307	170.6
October	596	1383	132.1
November	577	1417	145.6
December	596	1468	146.3
January	596	1429	139.8
February	539	1259	133.6
March	594	1424	139.7
April	576	1373	138.4
May	596	1448	143.0
June	578	1357	134.8

*Source of demand figures is FPC Form 12E-2 and Form ERA-119M.

Table A-9. Toledo Edison Company: Forecast of Electric Energy Demand (1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
July	643	683	6.2	638	-0.8
August	680	702	3.2	665	-2.2
September	604	670	10.9	605	0.2
October	650	667	2.6	642	-1.2
November	640	678	5.9	637	-0.5
December	700	727	3.9	670	-4.3
January	741	776	4.7	728	-1.8
February	652	766	17.5	657	0.8
March	668	768	15.0	670	0.3
April	572	693	21.2	592	3.5
May	591	664	12.4	600	1.5
June	612	689	12.6	614	0.3

*Source of demand figures is FPC Form 12E-2.

Table A-10. Forecast of Ohio Electricity Demand - Residential Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	Forecast (1981-1982)	Upper 95% Confidence Limit	Actual (1980-1981)	Forecast Percentage Change
July	1,989	2,317	2,646	2,387	-2.9
August	2,217	2,567	2,917	2,711	-5.3
September	2,071	2,442	2,812	2,561	-4.7
October	1,590	1,980	2,370	2,013	-1.6
November	1,765	2,174	2,582	2,193	-0.9
December	2,249	2,676	3,103	2,699	-0.9
January	2,792	3,236	3,680	3,334	-2.9
February	2,593	3,053	3,513	2,963	3.0
March	2,223	2,700	3,176	2,603	3.7
April	1,855	2,346	2,837	2,180	7.6
May	1,550	2,056	2,563	1,986	3.5
June	1,573	2,136	2,699		

Notes: 1. The forecast is based on the monthly comparative summary statistics of the Ohio Electric Utilities Institute for eight major investor-owned electric utilities (excluding OVEC).

2. Forecast by ODOE.

Table A-11. Forecast of Ohio Electricity Demand - Commercial Sector (1000 MWH)

Month	Lower 95% Confidence Limit	Forecast (1981-1982)	Upper 95% Confidence Limit	Actual (1980-1981)	Forecast Percentage Change
July	1,730	1,860	1,991	1,830	1.6
August	1,808	1,951	2,094	1,946	0.3
September	1,757	1,912	2,066	1,907	0.3
October	1,496	1,662	1,827	1,618	2.7
November	1,469	1,645	1,821	1,579	4.2
December	1,593	1,778	1,963	1,721	3.3
January	1,729	1,924	2,118	1,903	1.1
February	1,688	1,891	2,094	1,793	5.5
March	1,554	1,765	1,977	1,700	3.8
April	1,457	1,677	1,897	1,594	5.2
May	1,394	1,622	1,850	1,565	3.7
June	1,524	1,771	2,019		

Notes: 1. The forecast is based on the monthly comparative summary statistics of the Ohio Electric Utilities Institute for eight major investor-owned electric utilities (excluding OVEC).

2. Forecast by ODOE.

Table A-12. Forecast of Ohio Electricity Demand - Industrial Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	Forecast (1981-1982)	Upper 95% Confidence Limit	Actual (1980-1981)	Forecast Percentage Change
July	3,468	3,758	4,047	3,476	8.1
August	3,538	3,893	4,247	3,621	7.5
September	3,519	3,928	4,337	3,806	3.2
October	3,535	3,993	4,451	3,910	2.1
November	3,415	3,916	4,417	3,824	2.4
December	3,303	3,845	4,386	3,919	-1.9
January	3,316	3,896	4,474	3,861	0.9
February	3,255	3,869	4,483	3,953	-2.1
March	3,360	4,007	4,654	4,048	-1.0
April	3,274	3,953	4,632	3,927	0.7
May	3,271	3,980	4,689	3,930	1.3
June	3,208	3,950	4,692		

Notes: 1. The forecast is based on the monthly comparative summary statistics of the Ohio Electric Utilities Institute for eight major investor-owned electric utilities (excluding OVEC).

2. Forecast by ODOE.

Table A-13. Forecast of Ohio Electricity Demand - All Sectors
(1000 MWH)

Month	Lower 95% Confidence Limit	Forecast (1981-1982)	Upper 95% Confidence Limit	Actual (1980-1981)	Forecast Percentage Change
July	7,707	8,094	8,681	8,171	-1.0
August	7,777	8,496	9,216	8,765	-3.1
September	7,562	8,392	9,223	8,757	-4.2
October	6,949	7,878	8,806	8,007	-1.6
November	6,907	7,925	8,942	8,066	-1.7
December	7,398	8,497	9,596	8,845	-3.9
January	8,038	9,213	1,039	9,606	-4.1
February	7,790	9,036	1,028	9,211	-1.9
March	7,389	8,702	1,002	8,858	-1.8
April	6,663	8,040	9,418	8,122	-1.0
May	6,404	7,843	9,282	7,872	-0.4
June	6,194	7,741	9,288		

Notes: 1. The forecast is based on the monthly comparative summary statistics of the Ohio Electric Utilities Institute for eight major investor-owned electric utilities (excluding OVEC).

2. Forecast by ODOE.

APPENDIX B

FORECAST OF NATURAL GAS DEMAND
BY UTILITY

Table B-1. Comparison Between Two Years of Actual Gas Supply for Cincinnati Gas and Electric Company (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	ENERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
6/80	2165	0	259	0	0	0	0	6	0	41	306	0	0	2777
6/79	3035	0	200	0	0	0	0	8	0	109	306	0	0	3730
	-28.7%	0.0%	29.5%	0.0%	0.0%	0.0%	0.0%	-25.0%	0.0%	70.3%	0.0%	0.0%	0.0%	25.7%
7/80	2129	0	258	0	0	0	0	6	0	72	294	0	0	2759
7/79	2799	0	245	0	0	0	0	8	0	195	294	0	0	3541
	-23.9%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	-25.0%	0.0%	-63.1%	0.0%	0.0%	0.0%	-22.1%
8/80	2592	0	256	0	0	0	0	7	0	49	294	0	0	3198
8/79	2959	0	0	0	0	0	0	8	0	212	294	0	0	3473
	-12.4%	0.0%	999.9%	0.0%	0.0%	0.0%	0.0%	-12.5%	0.0%	-76.9%	0.0%	0.0%	0.0%	-7.9%
9/80	2803	0	247	0	0	0	0	7	0	90	293	0	0	3440
9/79	2713	0	209	0	0	0	0	9	0	154	214	0	0	3299
	3.3%	0.0%	18.2%	0.0%	0.0%	0.0%	0.0%	-22.2%	0.0%	-41.6%	36.9%	0.0%	0.0%	4.3%
10/80	5850	0	245	0	0	0	0	18	0	62	391	0	0	6566
10/79	5628	0	161	0	0	0	0	17	0	206	338	0	0	6350
	3.9%	0.0%	52.2%	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	-69.9%	15.7%	0.0%	0.0%	3.4%
11/80	8722	0	204	0	0	0	0	30	0	48	644	0	0	9648
11/79	7963	0	194	0	0	0	0	28	0	181	557	0	0	8923
	9.5%	0.0%	5.2%	0.0%	0.0%	0.0%	0.0%	7.1%	0.0%	-73.5%	15.6%	0.0%	0.0%	8.1%
12/80	11740	0	158	0	0	0	0	40	0	50	857	1	0	12846
12/79	10608	0	90	0	0	0	0	37	0	190	742	1	0	11668
	10.7%	0.0%	75.6%	0.0%	0.0%	0.0%	0.0%	8.1%	0.0%	-73.7%	15.5%	0.0%	0.0%	10.1%
1/81	13904	0	102	0	0	0	0	50	0	74	907	47	0	15164
1/80	12411	0	104	0	0	0	0	43	0	197	784	3	0	13542
	12.7%	0.0%	-1.9%	0.0%	0.0%	0.0%	0.0%	16.3%	0.0%	-62.4%	15.7%	1466.7%	0.0%	12.0%
2/81	10454	0	132	0	0	0	0	38	0	118	868	42	0	11652
2/80	12578	0	92	0	0	0	0	45	0	213	751	2	0	13681
	-16.9%	0.0%	43.5%	0.0%	0.0%	0.0%	0.0%	-15.6%	0.0%	-44.6%	15.6%	2000.0%	0.0%	-14.8%
3/81	9244	0	175	0	0	0	0	32	0	97	778	0	0	10326
3/80	10029	0	151	0	0	0	0	35	0	207	673	6	0	11101
	-7.8%	0.0%	15.9%	0.0%	0.0%	0.0%	0.0%	-8.6%	0.0%	-53.1%	15.6%	-100.0%	0.0%	-7.0%
4/81	4603	0	227	0	0	0	0	14	0	96	521	0	0	5461
4/80	5598	0	226	0	0	0	0	19	0	238	521	0	0	6602
	-17.8%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	-26.3%	0.0%	-59.7%	0.0%	0.0%	0.0%	-17.3%
5/81	4842	0	241	0	0	0	0	13	0	51	333	0	0	5480
5/80	2567	0	238	0	0	0	0	9	0	140	387	0	0	3341
	88.6%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	44.4%	0.0%	-63.6%	-14.0%	0.0%	0.0%	64.0%
SUMMER TOTAL														
	24784	0	1733	0	0	0	0	71	0	461	2432	0	0	29681
	25299	0	1279	0	0	0	0	78	0	1334	2354	0	0	30344
	-1.2%	0.0%	35.5%	0.0%	0.0%	0.0%	0.0%	-9.0%	0.0%	-65.4%	3.3%	0.0%	0.0%	-2.2%
WINTER TOTAL														
	54144	0	771	0	0	0	0	190	0	387	4054	90	0	59636
	53589	0	631	0	0	0	0	188	0	988	3507	12	0	58915
	1.0%	0.0%	22.2%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	-60.8%	15.6%	650.0%	0.0%	1.2%
YEAR TOTAL														
	79128	0	2504	0	0	0	0	261	0	848	6486	90	0	87317
	78888	0	1910	0	0	0	0	266	0	2322	5861	12	0	89259
	0.3%	0.0%	31.1%	0.0%	0.0%	0.0%	0.0%	-1.9%	0.0%	-63.5%	10.7%	650.0%	0.0%	0.1%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-2. Comparison Between Two Years of Actual Gas Supply for Columbia Gas of Ohio (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
6/80	12209	0	0	0	0	0	0	0	0	506	1289	0	-34	13970
6/79	13792	0	0	0	0	0	0	0	0	558	1289	0	-217	15422
	-11.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-9.3%	0.0%	0.0%	84.3%	-9.4%
7/80	11122	0	0	0	0	0	0	0	0	481	1158	0	3	12764
7/79	12363	0	0	0	0	0	0	0	0	480	1158	0	300	14301
	-10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	-99.0%	-10.7%
8/80	12097	0	0	0	0	0	0	0	0	465	1174	0	37	13773
8/79	13418	0	0	0	0	0	0	0	0	513	1174	0	152	15257
	-9.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-9.4%	0.0%	0.0%	-75.7%	-9.7%
9/80	12694	0	0	0	0	0	0	0	0	356	1268	0	122	14440
9/79	14777	0	0	0	0	0	0	0	0	530	933	0	-158	16082
	-14.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-32.8%	35.9%	0.0%	177.2%	-10.2%
10/80	24575	0	0	0	0	0	0	0	0	263	1755	0	377	26970
10/79	22526	0	0	0	0	0	0	0	0	528	1514	0	-224	24344
	9.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-50.2%	15.9%	0.0%	268.3%	10.8%
11/80	31534	0	0	0	0	0	0	0	0	474	2449	0	-34	34423
11/79	30198	0	0	0	0	0	0	0	0	623	2114	0	-60	32875
	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-23.9%	15.8%	0.0%	43.3%	4.7%
12/80	41847	0	0	0	0	0	0	0	0	240	3158	0	148	45393
12/79	37908	0	0	0	0	0	0	0	0	615	2725	0	142	41390
	10.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-61.0%	15.9%	0.0%	4.2%	9.7%
1/81	56008	0	0	0	0	0	0	0	0	276	3328	0	159	53771
1/80	45837	0	0	0	0	0	0	0	0	495	2872	0	99	49303
	9.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-44.2%	15.9%	0.0%	60.6%	9.1%
2/81	38883	0	0	0	0	0	0	0	0	64	3033	0	-109	41871
2/80	46193	0	0	0	0	0	0	0	0	562	2618	0	-131	49242
	-15.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-88.6%	15.9%	0.0%	16.8%	-15.0%
3/81	34619	0	0	0	0	0	0	0	0	134	2859	0	-225	37387
3/80	39486	0	0	0	0	0	0	0	0	396	2468	0	-44	42306
	-12.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-66.2%	15.8%	0.0%	-411.4%	-11.6%
4/81	20911	0	0	0	0	0	0	0	0	213	2102	0	-193	23033
4/80	25296	0	0	0	0	0	0	0	0	437	2102	0	-85	27750
	-17.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-51.3%	0.0%	0.0%	-127.1%	-17.0%
5/81	18861	0	0	0	0	0	0	0	0	59	1373	0	80	20413
5/80	15528	0	0	0	0	0	0	0	0	469	1595	0	-99	17513
	21.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-79.8%	-13.9%	0.0%	180.8%	16.6%
SUMMER TOTAL	112469	0	0	0	0	0	0	0	0	2383	10119	0	392	125363
	117700	0	0	0	0	0	0	0	0	3535	9765	0	-331	130669
	-4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-32.6%	3.6%	0.0%	218.4%	-4.1%
WINTER TOTAL	196891	0	0	0	0	0	0	0	0	1188	14827	0	-61	212845
	199622	0	0	0	0	0	0	0	0	2691	12792	0	6	215116
	-1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-55.9%	15.9%	0.0%	-1116.7%	-1.1%
YEAR TOTAL	309360	0	0	0	0	0	0	0	0	3571	24946	0	331	338208
	317322	0	0	0	0	0	0	0	0	6226	22562	0	-325	345785
	-2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-42.6%	10 6%	0.0%	201.8%	-2.2%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-3. Comparison Between Two Years of Actual Gas Supply for Dayton Power and Light Company (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
6/80	2374	0	0	0	3	0	0	0	0	0	0	0	0	2377
6/79	2789	0	0	0	3	0	0	0	0	0	191	0	0	2983
	-14.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-20.3%
7/80	2136	0	0	0	3	0	0	0	0	0	0	0	0	2139
7/79	2164	0	0	0	3	0	0	0	0	0	147	0	0	2314
	-1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-7.6%
8/80	1093	0	0	0	3	0	0	0	0	0	0	0	0	1896
8/79	2185	0	0	0	3	0	0	0	0	0	155	0	0	2343
	-13.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-19.1%
9/80	1939	0	0	0	4	0	0	0	0	0	0	0	0	1943
9/79	2263	0	0	0	4	0	0	0	0	0	140	0	0	2407
	-14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-19.3%
10/80	3036	0	0	0	8	0	0	0	0	0	0	0	0	3044
10/79	3654	0	0	0	7	0	0	0	0	0	0	0	0	3661
	-16.9%	0.0%	0.0%	0.0%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-16.9%
11/80	6044	0	0	0	14	0	0	0	0	0	0	0	0	6058
11/79	5634	0	0	0	14	0	0	0	0	0	384	0	0	6032
	7.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	0.4%
12/80	7597	0	0	0	18	0	0	0	0	0	0	0	0	7615
12/79	7099	0	0	0	17	0	0	0	6	0	544	0	0	7660
	7.0%	0.0%	0.0%	0.0%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-0.6%
1/81	10793	0	0	0	22	0	0	0	0	0	0	0	0	10815
1/80	7774	0	0	0	21	0	0	0	0	0	611	0	0	8406
	38.8%	0.0%	0.0%	0.0%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	28.7%
2/81	9316	0	0	0	17	0	0	0	0	0	0	0	0	9333
2/80	10702	0	0	0	20	0	0	0	0	0	0	0	0	10722
	-13.0%	0.0%	0.0%	0.0%	-15.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-13.0%
3/81	7049	0	0	0	15	0	0	0	0	0	0	0	0	7064
3/80	8517	0	0	0	18	0	0	0	0	0	0	0	0	8535
	-17.2%	0.0%	0.0%	0.0%	-16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-17.2%
4/81	4132	0	0	0	6	0	0	0	0	0	0	0	0	4138
4/80	5860	0	0	0	10	0	0	0	0	0	0	0	0	5870
	-29.5%	0.0%	0.0%	0.0%	-40.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-29.5%
5/81	3293	0	0	0	5	0	0	0	0	0	242	0	0	3540
5/80	3050	0	0	0	5	0	0	0	0	0	0	0	0	3055
	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	999.9%	0.0%	0.0%	15.9%
SUMMER TOTAL														
	18803	0	0	0	32	0	0	0	0	0	242	0	0	19077
	21965	0	0	0	35	0	0	0	0	0	633	0	0	22633
	-14.4%	0.0%	0.0%	0.0%	-8.6%	0.0%	0.0%	0.0%	0.0%	0.0%	-61.8%	0.0%	0.0%	-15.7%
WINTER TOTAL														
	40799	0	0	0	86	0	0	0	0	0	0	0	0	40885
	39726	0	0	0	90	0	0	0	0	0	1539	0	0	41355
	2.7%	0.0%	0.0%	0.0%	-4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	-100.0%	0.0%	0.0%	-1.1%
YEAR TOTAL														
	59602	0	0	0	118	0	0	0	0	0	242	0	0	59962
	61691	0	0	0	125	0	0	0	0	0	2172	0	0	63908
	-3.4%	0.0%	0.0%	0.0%	-5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	-88.9%	0.0%	0.0%	-6.3%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-4. Comparison Between Two Years of Actual Gas Supply for East Ohio Gas Company (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/PROPANE	OTHER	TOTAL SUPPLIES
6/80	0	12569	0	0	5362	0	0	0	0	4270	0	140	0	22341
6/79	0	16314	0	0	5384	0	0	0	0	4743	0	148	0	26589
	0.0%	-23.0%	0.0%	0.0%	-0.4%	0.0%	0.0%	0.0%	0.0%	-10.0%	0.0%	-5.4%	0.0%	-16.0%
7/80	0	9290	0	0	5725	0	0	0	0	4830	0	153	0	19990
7/79	0	14833	0	0	5519	0	0	0	0	4287	0	150	0	24789
	0.0%	-37.4%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	12.7%	0.0%	2.0%	0.0%	-19.3%
8/80	0	9737	0	0	5715	0	0	0	0	4275	0	151	0	19578
8/79	0	14588	0	0	5565	0	0	0	0	4514	0	143	0	24810
	0.0%	-33.3%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	-5.3%	0.0%	5.6%	0.0%	-19.9%
9/80	0	11377	0	0	5497	0	0	0	0	4550	0	158	0	21582
9/79	0	14480	0	0	5361	0	0	0	0	5114	0	148	0	25103
	0.0%	-21.4%	0.0%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	-11.0%	0.0%	6.8%	0.0%	-14.0%
10/80	0	22107	0	0	5813	0	0	0	0	4772	0	189	0	32881
10/79	0	23522	0	0	5655	0	0	0	0	4390	0	191	0	33758
	0.0%	-6.0%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	8.7%	0.0%	-1.0%	0.0%	-2.6%
11/80	0	12831	0	0	5605	0	0	0	0	3965	0	12117	0	34518
11/79	0	16191	0	0	5395	0	0	0	0	4805	0	7955	0	34346
	0.0%	-20.8%	0.0%	0.0%	3.9%	0.0%	0.0%	0.0%	0.0%	-17.5%	0.0%	52.3%	0.0%	0.5%
12/80	0	23026	0	0	5833	0	0	0	0	4338	0	13578	0	46775
12/79	0	15523	0	0	5603	0	0	0	0	4920	0	18419	0	44465
	0.0%	48.3%	0.0%	0.0%	4.1%	0.0%	0.0%	0.0%	0.0%	-11.8%	0.0%	-26.3%	0.0%	5.2%
1/81	0	27431	0	0	5816	0	0	0	0	4195	0	16390	0	53832
1/80	0	27304	0	0	5577	0	0	0	0	4950	0	15021	0	52852
	0.0%	0.5%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%	-15.3%	0.0%	9.1%	0.0%	1.9%
2/81	0	21701	0	0	5185	0	0	0	0	3685	0	9756	0	40327
2/80	0	30233	0	0	5367	0	0	0	0	3253	0	10437	0	49290
	0.0%	-28.2%	0.0%	0.0%	-3.4%	0.0%	0.0%	0.0%	0.0%	13.3%	0.0%	-6.5%	0.0%	-18.2%
3/81	0	20285	0	0	5735	0	0	0	0	4106	0	8770	0	38896
3/80	0	23793	0	0	5722	0	0	0	0	4321	0	9082	0	42918
	0.0%	-14.7%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	-5.0%	0.0%	-3.4%	0.0%	-9.4%
4/81	0	22109	0	0	5451	0	0	0	0	4274	0	488	0	32322
4/80	0	25845	0	0	5477	0	0	0	0	4410	0	380	0	36112
	0.0%	-14.5%	0.0%	0.0%	-0.5%	0.0%	0.0%	0.0%	0.0%	-3.1%	0.0%	28.4%	0.0%	-10.5%
5/81	0	17792	0	0	5793	0	0	0	0	4074	0	337	0	27996
5/80	0	16600	0	0	5589	0	0	0	0	4503	0	281	0	26373
	0.0%	11.2%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	-9.5%	0.0%	19.9%	0.0%	6.2%
SUMMER TOTAL														
	0	104981	0	0	39356	0	0	0	0	31045	0	1616	0	176998
	0	125582	0	0	38550	0	0	0	0	31961	0	1441	0	197534
	0.0%	-16.4%	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	-2.9%	0.0%	12.1%	0.0%	-10.4%
WINTER TOTAL														
	0	105274	0	0	28174	0	0	0	0	20289	0	60611	0	214348
	0	113044	0	0	27664	0	0	0	0	22249	0	60914	0	223871
	0.0%	-6.9%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	-8.8%	0.0%	-0.5%	0.0%	-4.3%
YEAR TOTAL														
	0	210255	0	0	67530	0	0	0	0	51334	0	62227	0	391346
	0	238626	0	0	66214	0	0	0	0	54210	0	62355	0	421405
	0.0%	-11.9%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	-5.3%	0.0%	-0.2%	0.0%	-7.1%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-5. Comparison Between Two Years of Actual Gas Supply for National Gas and Oil Company (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
6/80	0	0	0	0	0	149	546	0	0	513	0	2	-98	1112
6/79	0	0	0	0	0	116	542	0	0	387	0	5	-20	1030
	0.0%	0.0%	0.0%	0.0%	0.0%	28.4%	0.7%	0.0%	0.0%	32.6%	0.0%	60.0%	-390.0%	8.0%
7/80	0	0	0	0	0	153	606	0	0	473	0	0	-58	1174
7/79	0	0	0	0	0	112	572	0	0	417	0	9	-21	1089
	0.0%	0.0%	0.0%	0.0%	0.0%	36.6%	5.9%	0.0%	0.0%	13.4%	0.0%	-100.0%	-176.2%	7.8%
8/80	0	0	0	0	0	153	469	0	0	519	0	2	-32	1111
8/79	0	0	0	0	0	125	654	0	0	473	0	4	-16	1240
	0.0%	0.0%	0.0%	0.0%	0.0%	22.4%	-28.3%	0.0%	0.0%	9.7%	0.0%	-50.0%	-100.0%	-10.4%
9/80	0	0	0	0	0	140	589	0	0	508	0	2	-86	1153
9/79	0	0	0	0	0	110	595	0	0	507	0	1	-49	1164
	0.0%	0.0%	0.0%	0.0%	0.0%	27.3%	-1.0%	0.0%	0.0%	0.2%	0.0%	100.0%	-75.5%	-0.9%
10/80	0	0	0	0	0	157	670	0	0	466	0	68	-88	1273
10/79	0	0	0	0	0	129	642	0	0	531	0	24	-102	1224
	0.0%	0.0%	0.0%	0.0%	0.0%	21.7%	4.4%	0.0%	0.0%	-12.2%	0.0%	183.3%	13.7%	4.0%
11/80	0	0	0	0	0	154	535	0	0	550	0	113	-165	1187
11/79	0	0	0	0	0	153	534	0	0	533	0	131	-67	1284
	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.2%	0.0%	0.0%	3.2%	0.0%	-13.7%	-146.3%	-7.6%
12/80	0	0	0	0	0	158	617	0	0	466	0	135	-99	1277
12/79	0	0	0	0	0	142	621	0	0	522	0	216	-87	1414
	0.0%	0.0%	0.0%	0.0%	0.0%	11.3%	-0.6%	0.0%	0.0%	-10.7%	0.0%	-37.5%	-13.8%	-9.7%
1/81	0	0	0	0	0	135	656	0	0	435	0	199	67	1492
1/80	0	0	0	0	0	157	686	0	0	467	0	217	9	1536
	0.0%	0.0%	0.0%	0.0%	0.0%	-14.0%	-4.4%	0.0%	0.0%	-6.9%	0.0%	-8.3%	644.4%	-2.9%
2/81	0	0	0	0	0	124	574	0	0	492	0	214	48	1452
2/80	0	0	0	0	0	130	647	0	0	492	0	352	2	1623
	0.0%	0.0%	0.0%	0.0%	0.0%	-4.6%	-11.3%	0.0%	0.0%	0.0%	0.0%	-39.2%	2300.0%	-10.5%
3/81	0	0	0	0	0	150	622	0	0	487	0	277	-25	1511
3/80	0	0	0	0	0	133	640	0	0	466	0	268	96	1603
	0.0%	0.0%	0.0%	0.0%	0.0%	12.8%	-2.8%	0.0%	0.0%	4.5%	0.0%	3.4%	-126.0%	-5.7%
4/81	0	0	0	0	0	136	570	0	0	493	0	186	15	1400
4/80	0	0	0	0	0	148	546	0	0	532	0	51	4	1281
	0.0%	0.0%	0.0%	0.0%	0.0%	-8.1%	4.4%	0.0%	0.0%	-7.3%	0.0%	264.7%	275.0%	9.3%
5/81	0	0	0	0	0	137	614	0	0	481	0	88	-16	1304
5/80	0	0	0	0	0	139	566	0	0	478	0	5	7	1195
	0.0%	0.0%	0.0%	0.0%	0.0%	-1.4%	8.5%	0.0%	0.0%	0.6%	0.0%	1660.0%	-328.6%	9.1%
SUMMER TOTAL														
	0	0	0	0	0	1025	4064	0	0	3453	0	348	-363	8527
	0	0	0	0	0	879	4117	0	0	3325	0	99	-197	8223
	0.0%	0.0%	0.0%	0.0%	0.0%	16.6%	-1.3%	0.0%	0.0%	3.8%	0.0%	251.5%	-84.3%	3.7%
WINTER TOTAL														
	0	0	0	0	0	721	3004	0	0	2430	0	938	-174	6919
	0	0	0	0	0	715	3128	0	0	2480	0	1184	-47	7460
	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	-4.0%	0.0%	0.0%	-2.0%	0.0%	-20.8%	-270.2%	-7.3%
YEAR TOTAL														
	0	0	0	0	0	1746	7068	0	0	5883	0	1286	-537	15446
	0	0	0	0	0	1594	7245	0	0	5805	0	1283	-244	15683
	0.0%	0.0%	0.0%	0.0%	0.0%	9.5%	-2.4%	0.0%	0.0%	1.3%	0.0%	0.2%	-120.1%	-1.5%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-6. Comparison Between Two Years of Actual Gas Supply for
Ohio Gas Company
(MMCF)

MO/YR	COLUMBIA GAS	CONSOLIDATED GAS	LAWRENCEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/PROPANE	OTHER	TOTAL SUPPLIES
6/80	0	0	0	0	202	0	0	0	0	50	0	0	15	267
6/79	0	0	0	0	221	0	0	0	0	66	0	0	5	292
	0.0%	0.0%	0.0%	0.0%	-8.6%	0.0%	0.0%	0.0%	0.0%	-24.[illegible]%	0.0%	0.0%	200.0%	-8.6%
7/80	0	0	0	0	153	0	0	0	0	59	0	0	15	227
7/79	0	0	0	0	196	0	0	0	0	69	0	0	5	270
	0.0%	0.0%	0.0%	0.0%	-21.9%	0.0%	0.0%	0.0%	0.0%	-14.5%	0.0%	0.0%	200.0%	-15.9%
8/80	0	0	0	0	154	0	0	0	0	66	0	0	10	230
8/79	0	0	0	0	185	0	0	0	0	84	0	0	5	274
	0.0%	0.0%	0.0%	0.0%	-16.8%	0.0%	0.0%	0.0%	0.0%	-21.4%	0.0%	0.0%	100.0%	-16.1%
9/80	0	0	0	0	191	0	0	0	0	71	0	0	10	272
9/79	0	0	0	0	227	0	0	0	0	72	0	0	0	299
	0.0%	0.0%	0.0%	0.0%	-15.9%	0.0%	0.0%	0.0%	0.0%	-1.4%	0.0%	0.0%	999.9%	-9.0%
10/80	0	0	0	0	554	0	0	0	0	74	0	0	20	648
10/79	0	0	0	0	463	0	0	0	0	70	0	0	4	537
	0.0%	0.0%	0.0%	0.0%	19.7%	0.0%	0.0%	0.0%	0.0%	5.7%	0.0%	0.0%	400.0%	20.7%
11/80	0	0	0	0	620	0	0	0	0	70	0	0	33	723
11/79	0	0	0	0	666	0	0	0	0	97	0	0	16	779
	0.0%	0.0%	0.0%	0.0%	-6.9%	0.0%	0.0%	0.0%	0.0%	-27.8%	0.0%	0.0%	10[illegible]	7.2%
12/80	0	0	0	0	85[illegible]	0	0	0	0	71	0	0	[illegible]	989
12/79	0	0	0	0	809	0	0	0	0	68	0	0	24	[illegible]
	0.0%	0.0%	0.0%	0.0%	[illegible].1%	0.0%	0.0%	0.0%	0.0%	4.4%	0.0%	0.0%	150.0%	9.9%
1/81	0	0	0	18	910	0	0	0	[illegible]	7[illegible]	0	1[illegible]7	[illegible]	1[illegible]65
1/80	0	0	0	0	1014	0	0	0	0	[illegible]	0	0	26	[illegible]
	0.0%	0.0%	0.0%	999.9%	-10.3%	0.0%	0.0%	0.0%	0.0%	12.9%	0.0%	999.9%	-100.0%	6.3%
2/81	0	0	0	23	722	0	0	0	0	63	0	128	0	936
2/80	0	0	0	0	967	0	0	0	0	63	0	0	20	1050
	0.0%	0.0%	0.0%	999.9%	-25.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	999.9%	-100.0%	-10.9%
3/81	0	0	0	23	618	0	0	0	0	70	0	89	0	800
3/80	0	0	0	0	816	0	0	0	0	68	0	0	20	904
	0.0%	0.0%	0.0%	999.9%	-24.3%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	999.9%	-100.0%	-11.5%
4/81	0	0	0	15	384	0	0	0	0	45	0	0	0	444
4/80	0	0	0	0	439	0	0	0	0	64	0	0	20	523
	0.0%	0.0%	0.0%	999.9%	-12.5%	0.0%	0.0%	0.0%	0.0%	-29.7%	0.0%	0.0%	-100.0%	-15.1%
5/81	0	0	0	8	294	0	0	0	0	46	0	0	0	348
5/80	0	0	0	0	224	0	0	0	0	53	0	0	20	297
	0.0%	0.0%	0.0%	999.9%	31.3%	0.0%	0.0%	0.0%	0.0%	-13.2%	0.0%	0.0%	-100.0%	17.2%
SUMMER TOTAL	0	0	0	23	1932	0	0	0	0	411	0	0	70	2436
	0	0	0	0	1955	0	0	0	0	478	0	0	59	2492
	0.0%	0.0%	0.0%	999.9%	-1.2%	0.0%	0.0%	0.0%	0.0%	-14.0%	0.0%	0.0%	18.6%	-2.2%
WINTER TOTAL	0	0	0	64	3728	0	0	0	0	344	0	384	93	4613
	0	0	0	0	4272	0	0	0	0	358	0	0	100	4730
	0.0%	0.0%	0.0%	999.9%	-12.7%	0.0%	0.0%	0.0%	0.0%	-3.9%	0.0%	999.9%	-7.0%	-2.5%
YEAR TOTAL	0	0	0	87	5660	0	0	0	0	755	0	384	163	7049
	0	0	0	0	6227	0	0	0	0	836	0	0	159	7222
	0.0%	0.0%	0.0%	999.9%	-9.1%	0.0%	0.0%	0.0%	0.0%	-9.7%	0.0%	999.9%	2.5%	-2.4%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-7. Comparison Between Two Years of Actual Gas Supply for
River Gas Company
(MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWRENCEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	ENERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
6/80	0	19	0	0	0	0	0	0	0	134	0	0	0	153
6/79	0	57	0	0	0	0	0	0	0	172	0	0	0	229
	0.0%	-66.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-22.1%	0.0%	0.0%	0.0%	-33.2%
7/80	0	12	0	0	0	0	0	0	0	144	0	0	0	156
7/79	0	49	0	0	0	0	0	0	0	112	0	0	0	161
	0.0%	-75.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.6%	0.0%	0.0%	0.0%	-3.1%
8/80	0	26	0	0	0	0	0	0	0	121	0	0	0	147
8/79	0	51	0	0	0	0	0	0	0	116	0	0	0	167
	0.0%	-49.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	-12.0%
9/80	0	55	0	0	0	0	0	0	0	119	0	0	0	174
9/79	0	74	0	0	0	0	0	0	0	152	0	0	0	226
	0.0%	-25.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-21.7%	0.0%	0.0%	0.0%	-23.0%
10/80	0	195	0	0	0	0	0	0	0	155	0	0	0	350
10/79	0	187	0	0	0	0	0	0	0	139	0	0	0	326
	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.5%	0.0%	0.0%	0.0%	7.4%
11/80	0	362	0	0	0	0	0	0	0	126	0	0	0	488
11/79	0	257	0	0	0	0	0	0	0	163	0	0	0	420
	0.0%	40.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-22.7%	0.0%	0.0%	0.0%	16.2%
12/80	0	516	0	0	0	0	0	0	0	111	0	0	0	627
12/79	0	372	0	0	0	0	0	0	0	196	0	0	0	568
	0.0%	38.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-43.4%	0.0%	0.0%	0.0%	10.4%
1/81	0	692	0	0	0	0	0	0	0	133	0	0	0	825
1/80	0	468	0	0	0	0	0	0	0	159	0	0	0	627
	0.0%	47.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-16.4%	0.0%	0.0%	0.0%	31.6%
2/81	0	510	0	0	0	0	0	0	0	90	0	0	0	600
2/80	0	559	0	0	0	0	0	0	0	154	0	0	0	713
	0.0%	-8.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-41.6%	0.0%	0.0%	0.0%	-15.8%
3/81	0	435	0	0	0	0	0	0	0	97	0	0	0	532
3/80	0	415	0	0	0	0	0	0	0	146	0	0	0	561
	0.0%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-33.6%	0.0%	0.0%	0.0%	-5.2%
4/81	0	155	0	0	0	0	0	0	0	133	0	0	0	288
4/80	0	195	0	0	0	0	0	0	0	180	0	0	0	375
	0.0%	-20.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-26.1%	0.0%	0.0%	0.0%	-23.2%
5/81	0	102	0	0	0	0	0	0	0	117	0	0	0	219
5/80	0	68	0	0	0	0	0	0	0	135	0	0	0	203
	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-13.3%	0.0%	0.0%	0.0%	7.9%
SUMMER TOTAL														
	0	564	0	0	0	0	0	0	0	923	0	0	0	1487
	0	681	0	0	0	0	0	0	0	1006	0	0	0	1687
	0.0%	-17.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-8.3%	0.0%	0.0%	0.0%	-11.9%
WINTER TOTAL														
	0	2515	0	0	0	0	0	0	0	557	0	0	0	3072
	0	2071	0	0	0	0	0	0	0	818	0	0	0	2889
	0.0%	21.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-31.9%	0.0%	0.0%	0.0%	6.3%
YEAR TOTAL														
	0	3079	0	0	0	0	0	0	0	1480	0	0	0	4559
	0	2752	0	0	0	0	0	0	0	1824	0	0	0	4576
	0.0%	11.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-18.9%	0.0%	0.0%	0.0%	-0.4%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-8. Comparison Between Two Years of Actual Gas Supply for
West Ohio Gas Company
(MMCF)

MO/YR	COLUMBIA GAS	CONSOLID-ATED GAS	LAWREN-CEBURG	MICH. WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
6/80	385	0	0	5	0	0	0	0	0	0	40	0	0	430
6/79	503	0	0	7	0	0	0	0	0	0	40	0	0	550
	-23.5%	0.0%	0.0%	-23.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-21.8%
7/80	307	0	0	5	0	0	0	0	0	0	34	0	0	346
7/79	412	0	0	6	0	0	0	0	0	0	34	0	0	452
	-25.5%	0.0%	0.0%	-16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-23.5%
8/80	384	0	0	6	0	0	0	0	0	0	22	0	0	412
8/79	432	0	0	7	0	0	0	0	0	0	38	0	0	477
	-11.1%	0.0%	0.0%	-14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-42.1%	0.0%	0.0%	-13.6%
9/80	392	0	0	15	0	0	0	0	0	0	42	0	0	449
9/79	504	0	0	33	0	0	0	0	0	0	34	0	0	571
	-22.2%	0.0%	0.0%	-54.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.5%	0.0%	0.0%	-21.4%
10/80	963	0	0	27	0	0	0	0	0	0	56	0	0	1046
10/79	875	0	0	100	0	0	0	0	0	0	63	0	0	1038
	10.1%	0.0%	0.0%	73.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-11.1%	0.0%	0.0%	0.8%
11/80	1334	0	0	72	0	0	0	0	0	0	96	0	0	1502
11/79	1309	0	0	136	0	0	0	0	0	0	90	0	0	1535
	1.9%	0.0%	0.0%	-47.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	0.0%	0.0%	-2.1%
12/80	1741	0	0	85	0	0	0	0	0	0	125	0	0	1951
12/79	1562	0	0	159	0	0	0	0	0	0	120	0	0	1841
	11.5%	0.0%	0.0%	-46.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	6.0%
1/81	2050	0	0	132	0	0	0	0	0	0	153	0	0	2335
1/80	1941	0	0	190	0	0	0	0	0	0	129	0	0	2260
	5.6%	0.0%	0.0%	-30.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.6%	0.0%	0.0%	3.3%
2/81	1645	0	0	70	0	0	0	0	0	0	144	0	0	1859
2/80	1895	0	0	191	0	0	0	0	0	0	111	0	0	2197
	-13.2%	0.0%	0.0%	-63.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.7%	0.0%	0.0%	-15.4%
3/81	1458	0	0	56	0	0	0	0	0	0	115	0	0	1629
3/80	1575	0	0	158	0	0	0	0	0	0	99	0	0	1832
	-7.4%	0.0%	0.0%	-64.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.2%	0.0%	0.0%	-11.1%
4/81	739	0	0	33	0	0	0	0	0	0	88	0	0	860
4/80	967	0	0	95	0	0	0	0	0	0	77	0	0	1139
	-23.6%	0.0%	0.0%	-65.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.3%	0.0%	0.0%	-24.5%
5/81	608	0	0	28	0	0	0	0	0	0	55	0	0	691
5/80	560	0	0	7	0	0	0	0	0	0	58	0	0	625
	8.6%	0.0%	0.0%	300.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-5.2%	0.0%	0.0%	10.6%
SUMMER TOTAL														
	3778	0	0	119	0	0	0	0	0	0	337	0	0	4234
	4253	0	0	255	0	0	0	0	0	0	344	0	0	4852
	-11.2%	0.0%	0.0%	-53.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-2.0%	0.0%	0.0%	-12.7%
WINTER TOTAL														
	8228	0	0	415	0	0	0	0	0	0	633	0	0	9276
	8282	0	0	834	0	0	0	0	0	0	549	0	0	9665
	0.7%	0.0%	0.0%	-50.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.3%	0.0%	0.0%	-4.0%
YEAR TOTAL														
	12606	0	0	534	0	0	0	0	0	0	970	0	0	13510
	12535	0	0	1089	0	0	0	0	0	0	893	0	0	14517
	-4.2%	0.0%	0.0%	-51.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.6%	0.0%	0.0%	-6.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON ZERO VALUE AND THUS A DIVISION BY ZERO.

Table B-9. Comparison Between 1980-81 Actual and 1981-82 Forecast Gas Demand by Sector for Cincinnati Gas and Electric Company
(MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
6/81	9	149[illegible]	647	3321	-332	0	5135	0
6/80	24	995	612	1273	-103	0	2777	0
	-62.5%	50.7%	5.7%	160.9%	-222.3%	0.0%	84.9%	0.0%
7/81	0	823	558	2418	164	0	3963	0
7/80	0	798	491	1302	168	0	2759	0
	0.0%	3.1%	13.6%	85.7%	-2.4%	0.0%	43.6%	0.0%
8/81	0	822	559	2444	164	0	3989	0
8/80	0	748	490	1827	133	0	3198	0
	0.0%	9.9%	14.1%	33.8%	23.3%	0.0%	24.7%	0.0%
9/81	44	847	570	2448	177	0	4042	0
9/80	48	735	499	2015	191	0	3440	0
	-8.3%	15.2%	14.2%	21.5%	-7.3%	0.0%	17.5%	0.0%
10/81	271	1428	873	2676	1185	0	6162	0
10/80	446	1356	820	2301	2089	0	6566	0
	-39.2%	5.3%	6.5%	16.3%	-43.3%	0.0%	-6.2%	0.0%
11/81	636	2952	1727	2760	1954	0	9393	0
11/80	697	3096	1856	2752	1944	0	9648	0
	-8.8%	-4.7%	-7.0%	0.3%	0.5%	0.0%	-2.6%	0.0%
12/81	970	5425	3143	3146	1276	0	12990	0
12/80	988	4942	2898	3337	1669	0	12846	0
	-1.8%	9.8%	8.5%	-5.7%	-23.5%	0.0%	1.1%	0.0%
1/82	1051	6206	3521	2928	634	0	1328[illegible]	0
1/81	1261	7141	3957	3591	475	0	15164	0
	-16.7%	-13.1%	-11.0%	-18.5%	33.5%	0.0%	-12.4%	0.0%
2/82	888	5854	3299	2919	-508	0	11564	0
2/81	858	6368	3645	3147	-1508	0	11652	0
	3.5%	-8.1%	-9.5%	-7.2%	66.3%	0.0%	-0.8%	0.0%
3/82	722	5268	2997	3044	-846	0	10463	0
3/81	768	5005	2914	3031	-624	[illegible]	10326	0
	-6.0%	5.3%	2.8%	0.4%	-35.6%	0.0%	1.3%	0.[illegible]%
4/82	341	3769	2214	3110	-1440	0	7653	0
4/81	230	280[illegible]	1638	2647	-167[illegible]	0	5461	0
	48.3%	34.4%	35.2%	17.5%	[illegible]5%	0.0%	40.1%	0.0%
5/82	138	1959	1169	2812	-572	0	5368	0
5/81	191	1745	1058	2937	-260	0	5480	0
	-27.7%	12.3%	10.5%	[illegible]	-120.0%	0.0%	-2.0%	0.0%
SUMMER TOTAL								
	803	11147	6590	19229	-654	0	36312	0
	939	9181	5608	14302	590	0	29681	0
	-14.5%	21.4%	17.5%	34.4%	-210.8%	0.0%	22.3%	0.0%
WINTER TOTAL								
	4267	25705	14687	14797	2510	0	57699	0
	4572	26552	15270	1585[illegible]	1956	0	59636	0
	-6.7%	-3.2%	-3.[illegible]%	-6.7%	28.3%	0.0%	-3.2%	0.0%
YEAR TOTAL								
	5070	36852	21277	3402[illegible]	1856	0	94011	0
	5511	35733	20878	30160	2546	0	89317	0
	-8.0%	3.1%	1.9%	12.8%	-27.1%	0.0%	5.3%	0.0%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-10. Comparison Between 1980-81 Actual and 1981-82 Forecast Gas Demand by Sector for Columbia Gas of Ohio (MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
6/81	85	4294	1888	11650	-1107	0	16725	0
6/80	83	4219	1712	8790	-751	0	13970	0
	2.4%	1.8%	10.3%	32.5%	-47.4%	0.0%	19.7%	0.0%
7/81	0	3173	1531	9280	-451	0	13533	0
7/80	0	3419	1483	8368	-506	0	12764	0
	0.0%	-7.2%	3.2%	10.9%	10.9%	0.0%	6.0%	0.0%
8/81	0	3172	1529	10263	534	0	15498	0
8/80	0	2901	1438	9180	254	0	13773	0
	0.0%	9.3%	6.3%	11.8%	110.2%	0.0%	12.5%	0.0%
9/81	38	3354	1557	10524	647	0	16082	0
9/80	26	2882	1372	9412	774	0	14440	0
	46.2%	16.4%	13.5%	11.8%	-16.4%	0.0%	11.4%	0.0%
10/81	197	6019	2529	11500	4219	0	24267	0
10/80	278	6677	2635	9663	5409	2586	26970	0
	-29.1%	-9.9%	-4.0%	19.0%	-22.0%	-100.0%	-10.0%	0.0%
11/81	570	12288	5327	1245[illegible]	3343	0	33415	0
11/80	640	12789	5312	1177[illegible]	4545	0	34423	0
	-10.9%	-3.9%	0.3%	5.8%	-26.4%	0.0%	-2.9%	0.0%
12/81	951	19390	8449	13063	5421	0	46320	0
12/80	962	19238	8019	13342	4794	0	45393	0
	-1.1%	0.8%	5.4%	-2.1%	13.1%	0.0%	2.0%	0.0%
1/82	1290	26030	11353	14516	5489	0	57388	0
1/81	1415	27517	11538	14601	115	0	53771	0
	-8.8%	-5.4%	-1.6%	-0.6%	4673.0%	0.0%	6.7%	0.0%
2/82	1102	23192	10173	14269	-2868	0	44774	0
2/81	1112	22429	9780	13019	0	-3357	41871	0
	-0.9%	3.4%	4.0%	9.6%	999.9%	100.0%	6.9%	0.0%
3/82	918	20248	8751	13594	-3172	0	39421	0
3/81	851	18263	7801	11957	-634	0	37387	0
	7.9%	10.9%	12.2%	13.7%	-400.3%	0.0%	5.4%	0.0%
4/82	560	13447	5775	12045	-3153	45	28159	0
4/81	451	10745	4688	11112	0	-3512	23033	0
	24.2%	25.1%	23.2%	8.4%	999.9%	101.3%	22.3%	0.0%
5/82	288	7904	3379	11295	-1970	0	20608	0
5/81	313	7643	3142	10[illegible]	-1252	0	20411	0
	-8.0%	3.4%	7.5%	3.8%	-57.3%	0.0%	1.0%	0.0%
SUMMER TOTAL								
	1168	41363	18188	76557	-1281	45	134872	0
	1151	38486	16470	67405	3928	-926	125363	0
	1.5%	7.5%	10.4%	13.6%	-132.6%	104.9%	7.6%	0.0%
WINTER TOTAL								
	4831	101148	44053	67896	8221	0	221318	0
	4980	100236	42450	64696	8820	-3357	212845	0
	-3.0%	0.9%	3.8%	4.9%	-6.8%	100.0%	4.0%	0.0%
YEAR TOTAL								
	5999	142511	62241	144453	6940	45	356190	0
	6131	138722	58920	132101	12748	-4283	338208	0
	-2.2%	2.7%	5.6%	9.4%	-45.6%	101.1%	5.3%	0.0%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table 8-11. Comparison Between 1980-81 Actual and 1981-82 Forecast Gas Demand by Sector for
Dayton Power and Light Company
(MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
6/81	78	971	410	958	-147	0	2192	0
6/80	52	910	389	987	-67	158	2377	0
	25.8%	6.7%	5.4%	-2.9%	-119.4%	-100.0%	-7.8%	0.0%
7/81	9	645	330	931	-49	0	1857	0
7/80	15	712	328	882	-24	241	2139	0
	-40.0%	-9.4%	0.6%	5.6%	-104.2%	-100.0%	-13.2%	0.0%
8/81	1	644	312	929	36	0	1921	0
8/80	0	620	313	914	49	0	1896	0
	999.9%	3.9%	-0.3%	1.6%	-26.5%	0.0%	1.3%	0.0%
9/81	29	644	340	1016	45	0	2045	0
9/80	22	653	336	815	82	57	1943	0
	31.8%	-1.4%	1.2%	24.7%	-45.1%	-100.0%	5.2%	0.0%
10/81	192	1446	530	1171	319	[illegible]	3466	0
10/80	268	1233	552	1042	59	14[illegible]	3044	0
	-28.4%	12.7%	-4.0%	12.4%	440.7%	-100.[illegible]	13.9%	0.0%
11/81	482	2660	988	1386	352	0	5386	0
11/80	603	2757	1067	1601	602	31	6058	0
	-20.1%	-3.5%	-7.4%	-13.4%	-41.5%	-100.0%	-11.1%	0.0%
12/81	865	4268	1525	1595	451	0	7839	0
12/80	871	4114	1502	1560	439	0	7615	0
	-0.7%	3.7%	1.5%	2.2%	2.7%	0.0%	2.9%	0.0%
1/82	1111	5243	1788	1781	86	0	8898	0
1/81	1307	6011	2141	1910	753	0	10815	0
	-15.0%	-12.8%	-16.5%	-6.8%	-88.6%	0.0%	-17.7%	0.0%
2/82	1135	5349	1873	1798	180	0	9200	0
2/81	1103	5468	2042	1800	23	0	9333	0
	2.9%	-2.2%	-8.3%	-0.1%	682.6%	0.0%	-1.4%	0.0%
3/82	852	4182	1498	1568	-292	0	6956	0
3/81	824	4292	1572	1563	-363	0	7064	0
	3.4%	2.6%	-4.7%	0.3%	19.6%	0.0%	-1.5%	0.0%
4/82	629	3252	1185	1328	-205	0	5560	0
4/81	446	2646	999	1136	-643	0	4138	0
	41.0%	22.9%	18.6%	16.9%	68.1%	0.0%	34.4%	0.0%
5/82	288	1839	677	1053	-257	0	3312	0
5/81	312	1739	651	1015	135	0	3540	0
	-7.7%	5.8%	4.0%	3.7%	-290.4%	0.0%	-6.4%	0.0%
SUMMER TOTAL								
	1226	9441	3784	7386	-258	0	20353	0
	1125	8563	3568	6791	-409	564	19077	0
	9.0%	10.3%	6.1%	8.8%	36.9%	-100.0%	6.7%	0.0%
WINTER TOTAL								
	4445	21702	7672	8128	777	0	38279	0
	4708	22642	8324	8434	1454	31	40885	0
	-5.6%	-4.2%	-7.8%	-3.6%	-46.6%	-100.0%	-6.4%	0.0%
YEAR TOTAL								
	5671	31143	11456	15514	519	0	58632	0
	5833	31205	11892	15225	1045	595	59962	0
	-2.8%	-0.2%	-3.7%	1.9%	-50.3%	-100.0%	-2.2%	0.0%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-12. Comparison Between 1980-81 Actual and 1981-82 Forecast Gas Demand by Sector for East Ohio Gas Company
(MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
6/81	121	5686	2264	8304	974	9712	24992	0
6/80	134	5102	1822	6596	554	9375	22341	0
	-9.7%	11.4%	24.3%	25.9%	-75.8%	3.6%	11.9%	0.0%
7/81	7	4088	1641	6958	476	9417	22580	0
7/80	33	3946	1597	5524	263	8668	19998	0
	-78.8%	3.6%	2.8%	26.0%	81.0%	8.6%	12.9%	0.0%
8/81	12	3824	1542	7975	873	8712	22926	0
8/80	3	3662	1516	5718	429	8553	19878	0
	300.0%	4.4%	1.7%	39.5%	103.5%	1.9%	15.3%	0.0%
9/81	55	4502	1798	8165	1815	8460	24740	0
9/80	31	3416	1610	6602	1687	8267	21582	0
	77.4%	31.8%	11.7%	23.7%	7.6%	2.3%	14.6%	0.0%
10/81	219	7089	2864	8582	4849	6833	30217	0
10/80	300	6993	2879	7610	8639	6760	32881	0
	-27.0%	1.4%	-0.5%	12.8%	-43.9%	1.1%	-8.1%	0.0%
11/81	534	12770	4987	9118	5790	0	32665	0
11/80	638	14201	5713	9021	5597	-14	34518	0
	-16.3%	-10.1%	-12.7%	1.1%	3.4%	100.0%	-5.4%	0.0%
12/81	983	21382	8232	9867	4043	0	43524	0
12/80	995	21978	8879	10077	5841	0	46775	0
	-1.2%	-2.7%	-7.3%	-2.1%	-30.8%	0.0%	-7.0%	0.0%
1/82	1197	25662	9865	10856	866	1326	48575	0
1/81	1423	29238	11465	10946	216[illegible]	0	53832	0
	-15.9%	-12.2%	-14.0%	-0.8%	-60.3%	999.9%	-9.8%	0.0%
2/82	1155	24333	9357	11182	-2249	1326	43949	0
2/81	1156	25066	99[illegible]1	10403	-5043	[illegible]	40327	0
	-0.1%	-2.9%	-5.5%	7.5%	55.4%	999.9%	[illegible].0%	0.[illegible]%
3/82	954	20896	8105	10097	-548	0	38550	0
3/81	900	2066[illegible]	8097	9954	[illegible]	135	38896	0
	6.0%	1.1%	0.1%	1.4%	-12[illegible].3%	-100.0%	-0.9%	0.0%
4/82	660	14975	5837	9228	-3674	8263	34629	0
4/81	528	13585	4969	8767	-4184	9185	32322	0
	25.0%	10.2%	17.5%	5.3%	12.2%	-10.0%	7.1%	0.0%
5/82	329	8713	3434	8685	-1300	10277	29809	0
5/81	365	9626	3325	8362	-2890	9573	27996	0
	-9.9%	-9.5%	3.3%	3.9%	55.0%	7.4%	6.5%	0.0%
SUMMER TOTAL								
	1403	48877	19380	57897	2065	61674	189893	0
	1394	46330	17718	49179	3390	60381	176998	0
	0.6%	5.5%	9.4%	17.7%	-39.1%	2.1%	7.3%	0.0%
WINTER TOTAL								
	4823	105043	40546	51120	7902	2652	207263	0
	5112	111147	44055	5040.	8624	121	214348	0
	-5.7%	-5.5%	-8.0%	1.4%	-8.4%	2091.7%	-3.3%	0.0%
YEAR TOTAL								
	6226	153920	59926	109017	9967	64326	397156	0
	6506	157477	61773	99580	12014	60502	391346	0
	-4.3%	-2.3%	-3.0%	9.5%	-17.0%	6.3%	1.5%	0.0%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

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(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-13. Comparison Between 1980-81 Actual and 1981-82 Forecast Gas Demand by Sector for National Gas and Oil Company
(MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
6/81	0	50	30	700	18	170	986	-222
6/80	0	50	23	596	284	[illegible]	1112	0
	0.0%	0.0%	30.4%	17.4%	[illegible]	19.5%	-11.2%	999.9%
7/81	0	42	20	680	18	260	1020	-180
7/80	0	35	17	688	226	208	1174	0
	0.0%	20.0%	17.6%	-1.2%	-92.0%	25.0%	-13.1%	999.9%
8/81	0	40	20	720	18	280	1078	-107
8/80	0	38	18	683	164	208	1111	0
	0.0%	5.3%	11.1%	5.4%	-89.0%	34.6%	-3.0%	999.9%
9/81	108	40	20	720	18	230	1028	-137
9/80	89	32	17	694	221	189	1153	0
	21.3%	25.0%	17.6%	3.7%	-91.9%	21.7%	-10.8%	999.9%
10/81	393	70	35	701	20	190	1015	-85
10/80	466	71	35	805	256	106	1273	0
	-16.0%	-1.4%	0.0%	-13.0%	-92.2%	79.2%	-20.3%	999.9%
11/81	707	155	80	770	18	0	1023	-60
11/80	740	152	73	739	185	38	1187	0
	-4.5%	2.0%	9.6%	4.2%	-90.3%	-100.0%	-13.8%	999.9%
12/81	1060	230	110	740	18	0	1098	-176
12/80	990	230	107	740	183	17	1277	0
	7.1%	0.0%	2.8%	0.0%	-90.2%	-100.0%	-14.0%	999.9%
1/82	1221	310	150	720	18	0	1198	-237
1/81	1345	354	165	849	119	5	1492	0
	-9.2%	-12.4%	-9.1%	-15.2%	-84.9%	-100.0%	-19.7%	999.9%
2/82	1045	290	140	700	18	0	1148	-329
2/81	971	297	142	671	342	0	1452	0
	7.6%	-2.4%	-1.4%	4.3%	-94.7%	0.0%	-20.9%	999.9%
3/82	824	270	118	720	18	0	1126	-354
3/81	884	224	106	706	475	0	1511	0
	-6.8%	20.5%	11.3%	2.0%	-96.2%	0.0%	-25.5%	999.9%
4/82	456	180	84	700	18	0	982	-388
4/81	404	158	74	632	536	0	1400	0
	12.9%	13.9%	13.5%	10.8%	-96.6%	0.0%	-29.9%	999.9%
5/82	194	120	55	700	18	160	1053	-167
5/81	317	100	43	667	494	0	1304	0
	-38.8%	20.0%	27.9%	4.9%	-96.4%	999.9%	-19.2%	999.9%
SUMMER TOTAL	1151	542	264	4920	128	1310	7164	-1286
	1278	484	227	4765	2181	870	8527	0
	-9.9%	12.0%	16.3%	3.3%	-94.1%	50.6%	-16.0%	999.9%
WINTER TOTAL	4857	1255	598	3650	90	0	5593	-1156
	4930	1257	593	3705	1304	60	6919	0
	-1.5%	-0.2%	0.8%	-1.5%	-93.1%	-100.0%	-19.2%	999.9%
YEAR TOTAL	6008	1797	862	8570	218	1310	12757	-2442
	6208	1741	820	8470	3485	930	15446	0
	-3.2%	3.2%	5.1%	1.2%	-93.7%	40.9%	-17.4%	999.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

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(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-14. Comparison Between 1980-81 Actual and 1981-82 Forecast Gas Demand by Sector for Ohio Gas Company
(MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
6/81	31	96	40	212	10	0	358	381
6/80	47	85	34	158	10	0	267	0
	-34.0%	12.9%	17.6%	34.2%	200.0%	0.0%	34.1%	999.9%
7/81	4	63	28	185	10	0	286	332
7/80	0	58	24	133	12	0	227	0
	999.9%	8.6%	16.7%	39.1%	-16.7%	0.0%	[illegible]	999.9%
8/81	11	66	30	188	11	0	295	-373
8/80	1	55	24	136	15	0	230	0
	1000.0%	20.0%	25.0%	38.2%	-26.7%	0.0%	28.3%	999.9%
9/81	101	76	32	216	46	0	370	-564
9/80	80	57	27	162	26	0	272	0
	26.3%	33.3%	18.5%	33.3%	76.9%	0.0%	36.0%	999.9%
10/81	381	188	81	252	23	0	544	-679
10/80	221	126	66	281	144	31	648	0
	72.4%	49.2%	22.7%	-10.3%	-84.0%	-100.0%	-16.0%	999.9%
11/81	727	311	132	274	32	0	749	1200
11/80	726	259	118	243	103	0	723	0
	0.1%	20.1%	11.9%	12.8%	-68.9%	0.0%	3.6%	999.9%
12/81	1131	459	197	331	44	0	1031	-993
12/80	1153	374	170	273	172	0	989	0
	-1.9%	22.7%	15.9%	21.2%	-74.4%	0.0%	4.2%	999.9%
1/82	1321	529	228	356	50	0	1163	-841
1/81	1398	566	245	317	37	0	1165	0
	-5.5%	-6.5%	-6.9%	12.3%	35.1%	0.0%	-0.2%	999.9%
2/82	1117	451	195	315	43	0	1004	-790
2/81	1196	502	217	287	-70	0	936	0
	-6.6%	-10.2%	-10.1%	9.8%	161.4%	0.0%	7.3%	999.9%
3/82	870	368	158	280	36	0	842	-1107
3/81	793	380	168	276	-24	0	800	0
	9.7%	-3.2%	-6.0%	1.4%	250.0%	0.0%	5.3%	999.9%
4/82	476	224	96	208	24	0	552	-732
4/81	440	260	93	170	-79	0	444	0
	8.2%	-13.8%	3.2%	22.4%	130.4%	0.0%	24.3%	999.9%
5/82	206	128	53	159	15	0	355	-688
5/81	260	176	60	143	-31	0	348	0
	-20.8%	-27.3%	-11.7%	11.2%	148.4%	0.0%	2.0%	999.9%
SUMMER TOTAL								
	1210	841	360	1420	139	0	2760	-3749
	1049	817	328	1183	77	31	2436	0
	15.3%	2.9%	9.8%	20.0%	80.5%	-100.0%	13.3%	999.9%
WINTER TOTAL								
	5166	2118	910	1556	205	0	4789	-4931
	5266	2081	918	1396	218	0	4613	0
	-1.9%	1.8%	-0.9%	11.5%	-6.0%	0.0%	3.8%	999.9%
YEAR TOTAL								
	6376	2959	1270	2976	344	0	7549	-8680
	6315	2898	1246	2579	295	31	7049	0
	1.0%	2.1%	1.9%	15.4%	16.6%	-100.0%	7.1%	999.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-15. Comparison Between 1980-81 Actual and 1981-82 Forecast Gas Demand by Sector for
River Gas Company
(MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
6/81	34	55	24	69	-2	0	146	0
6/80	40	49	17	79	8	0	153	0
	-15.0%	12.2%	41.2%	-12.7%	-125.0%	0.0%	-4.6%	0.0%
7/81	0	43	18	59	12	0	132	0
7/80	1	42	16	63	35	0	156	0
	-100.0%	2.4%	12.5%	-6.3%	-65.7%	0.0%	-15.4%	0.0%
8/81	0	41	18	64	12	0	135	0
8/80	0	38	14	79	16	0	147	0
	0.0%	7.9%	28.6%	-19.0%	-25.0%	0.0%	-8.2%	0.0%
9/81	16	45	19	89	29	0	182	0
9/80	6	40	16	119	-1	0	174	0
	166.7%	12.5%	18.8%	-25.2%	3000.0%	0.0%	4.6%	0.0%
10/81	167	89	34	123	63	0	309	0
10/80	213	60	24	111	155	0	350	0
	-21.6%	48.3%	41.7%	10.8%	-59.4%	0.0%	-11.7%	0.0%
11/81	491	182	70	131	75	0	458	0
11/80	628	166	62	130	130	0	488	0
	-21.8%	9.6%	12.9%	0.8%	-42.3%	0.0%	-6.1%	0.0%
12/81	817	278	107	131	101	0	617	0
12/80	811	279	105	146	97	0	627	0
	0.7%	-0.4%	1.9%	-10.3%	4.1%	0.0%	-1.6%	0.0%
1/82	993	331	128	196	65	0	720	0
1/81	1276	412	154	163	96	0	825	0
	-22.2%	-19.7%	-16.9%	20.2%	-32.3%	0.0%	12.7%	0.0%
2/82	972	325	125	208	1	0	659	0
2/81	1039	364	147	191	-102	0	600	0
	-6.4%	-10.7%	-15.0%	8.9%	101.0%	0.0%	9.8%	0.0%
3/82	711	272	104	160	-18	0	518	0
3/81	764	265	101	139	27	0	532	0
	-6.9%	2.6%	3.0%	15.1%	-166.7%	0.0%	2.6%	0.0%
4/82	446	186	71	124	-52	0	329	0
4/81	411	193	75	144	-124	0	288	0
	8.5%	-3.6%	-5.3%	-13.9%	58.1%	0.0%	14.2%	0.0%
5/82	170	102	39	137	-17	0	261	0
5/81	252	111	40	103	-35	0	219	0
	-32.5%	-8.1%	-2.5%	33.0%	51.4%	0.0%	19.2%	0.0%
SUMMER TOTAL								
	833	561	223	665	45	0	1494	0
	923	533	202	699	54	0	1487	0
	-9.8%	5.3%	10.4%	-4.7%	-16.7%	0.0%	0.5%	0.0%
WINTER TOTAL								
	3984	1388	534	826	224	0	2972	0
	4518	1486	569	769	248	0	3072	0
	-11.8%	-6.6%	-6.2%	7.4%	-9.7%	0.0%	-3.3%	0.0%
YEAR TOTAL								
	4817	1949	757	1491	269	0	4466	0
	5441	2019	771	1467	302	0	4559	0
	-11.5%	-3.5%	-1.8%	1.6%	-10.9%	0.0%	2.0%	0.0%

—NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

Table B-16. Comparison Between 1980-81 Actual and 1981-82 Forecast Gas Demand by Sector for West Ohio Gas Company (MMCF)

MONTH/YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
6/81	114	232	121	271	-93	0	531	0
6/80	78	198	102	194	-64	0	430	0
	46.2%	17.2%	18.6%	39.7%	-45.3%	0.0%	23.5%	0.0%
7/81	15	147	93	201	-11	0	430	0
7/80	23	135	80	160	-29	0	346	0
	-34.8%	8.9%	16.3%	25.6%	62.1%	0.0%	24.3%	0.0%
8/81	5	136	88	241	82	0	547	0
8/80	0	119	79	175	39	0	412	0
	999.9%	14.3%	11.4%	37.7%	110.3%	0.0%	32.8%	0.0%
9/81	25	156	93	27[illegible]	45	0	573	0
9/80	3	117	81	205	48	0	449	0
	733.3%	33.3%	14.8%	37.4%	-6.3%	0.0%	27.6%	0.0%
10/81	158	274	155	269	339	0	1037	0
10/80	124	228	174	214	430	0	1046	0
	27.4%	20.2%	-10.9%	25.7%	-21.2%	0.0%	-0.9%	0.0%
11/81	464	550	287	263	296	0	1396	0
11/80	494	540	347	238	377	0	1502	0
	-6.1%	1.9%	-17.3%	10.5%	-21.5%	0.0%	-7.1%	0.0%
12/81	811	868	445	301	174	0	1780	0
12/80	913	1001	517	306	127	0	1951	0
	-11.2%	-13.3%	-13.9%	-1.6%	37.0%	0.0%	-8.4%	0.0%
1/82	1137	1164	610	308	259	0	2341	0
1/81	1375	1210	676	320	129	0	2335	0
	-17.3%	-3.8%	-9.8%	-3.8%	100.8%	0.0%	0.3%	0.0%
2/82	1175	1197	628	325	67	0	2217	0
2/81	1190	1067	581	339	-128	0	1859	0
	-1.3%	12.2%	8.1%	-4.1%	152.3%	0.0%	19.3%	0.0%
3/82	907	920	510	324	-157	0	1597	0
3/81	769	793	431	304	101	0	1629	0
	17.9%	16.0%	18.3%	6.6%	-255.4%	0.0%	-2.0%	0.0%
4/82	710	747	408	298	-232	0	1221	0
4/81	560	574	298	259	-271	0	860	0
	26.8%	30.1%	36.9%	15.1%	14.4%	0.0%	42.0%	0.0%
5/82	338	422	237	277	-147	0	789	0
5/81	369	408	213	223	-153	0	691	0
	-8.4%	3.4%	11.3%	24.2%	3.9%	0.0%	14.2%	0.0%
SUMMER TOTAL								
	1365	2114	1195	1836	-17	0	5128	0
	1157	1779	1027	1428	0	0	4234	0
	18.0%	18.8%	16.4%	28.6%	999.9%	0.0%	21.1%	0.0%
WINTER TOTAL								
	4494	4699	2480	1521	639	0	9339	0
	4741	4611	2552	1507	606	0	9276	0
	-5.2%	1.9%	-2.8%	0.9%	5.4%	0.0%	0.7%	0.0%
YEAR TOTAL								
	5859	6813	3675	3357	622	0	14467	0
	5898	6390	3579	2935	606	0	13510	0
	-0.7%	6.6%	2.7%	14.4%	2.6%	0.0%	7.1%	0.0%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON-ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE. A NEGATIVE DEFICIENCY INDICATES SURPLUS

Table B-17. Projected Supply and Demand for Eight Major Ohio Natural Gas Utilities
(MMCF)

COMPANY: CINN. GAS & ELEC.

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	6/81	7/81	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	SUMMER	WINTER	YEAR
SUPPLY	5135	3963	3989	4042	6162	9393	12990	13289	11564	10463	7653	5368	36312	57699	94011
DEMAND	5135	3963	3989	4042	6162	9393	12990	13289	11564	10463	7653	5368	36312	57699	94011
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: COLUMBIA GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	6/81	7/81	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	SUMMER	WINTER	YEAR
SUPPLY	16725	13533	15498	16082	24267	33415	46320	57388	44774	39421	28159	20608	134872	221318	356190
DEMAND	16725	13533	15498	16082	24267	33415	46320	57388	44774	39421	28159	20608	134872	221318	356190
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: DAYTON POWER & LIGHT

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	6/81	7/81	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	SUMMER	WINTER	YEAR
SUPPLY	2192	1857	1921	2045	3466	5386	7839	8898	9200	6956	5560	3312	20353	38279	58632
DEMAND	2192	1857	1921	2045	3466	5386	7839	8898	9200	6956	5560	3312	20353	38279	58632
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: EAST OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	6/81	7/81	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	SUMMER	WINTER	YEAR
SUPPLY	24992	22580	22926	24740	30217	32665	43524	48575	43949	38550	34629	29809	189893	207263	397156
DEMAND	24992	22580	22926	24740	30217	32665	43524	48575	43949	38550	34629	29809	189893	207263	397156
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table B 17. Projected Supply and Demand for Eight Major Ohio Natural Gas Utilities (Cont'd)
(MMCF)

COMPANY: NATIONAL GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	6/81	7/81	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	SUMMER	WINTER	YEAR
SUPPLY	1210	1200	1185	1165	1100	1083	1274	1435	1477	1480	1370	1220	8450	6749	15199
DEMAND	988	1020	1078	1028	1015	1023	1098	1198	1148	1126	982	1053	7164	5593	12757
DEFICIENCY	-222	-180	107	-137	-85	-60	-176	-237	-329	-354	-388	167	-1286	-1156	-2442
% DEFICIEPCY	-22.5%	-17.6%	-9.9%	-13.3%	-8.4%	-5.9%	-16.0%	-19.8%	-28.7%	-31.4%	-39.5%	-15.9%	-18.0%	-20.7%	-19.1%

COMPANY: OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	6/81	7/81	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	SUMMER	WINTER	YEAR
SUPPLY	739	618	668	934	1223	1949	2024	2004	1794	1949	1284	1043	6509	9720	16229
DEMAND	358	286	295	370	544	749	1031	1163	1004	842	552	355	2760	4789	7549
DEFICIENCY	-381	-332	-373	-564	-679	-1200	-993	-841	-790	-1107	-732	-688	-3749	-4931	-8680
% DEFICIENCY	-106.4%	-116.1%	126.4%	-152.4%	-124.8%	-160.2%	-96.3%	-72.3%	-78.7%	-131.5%	-132.6%	-193.8%	-135.8%	-103.0%	115.0%

COMPANY: RIVER GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	6/81	7/81	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	SUMMER	WINTER	YEAR
SUPPLY	146	132	135	182	309	458	617	720	659	518	329	261	1494	2972	4466
DEMAND	146	132	135	182	309	458	617	720	659	518	329	261	1494	2972	4466
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: WEST OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	6/81	7/81	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	SUMMER	WINTER	YEAR
SUPPLY	531	430	547	573	1037	1396	1788	2341	2217	1597	1221	789	5128	9339	14467
DEMAND	531	430	547	573	1037	1396	1788	2341	2217	1597	1221	789	5128	9339	14467
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

S6275-1 A

An Assessment of the Supplies of Natural Gas and Fuels for Generating Electricity in Ohio From November 1981 - October 1982

Presented to

Governor James A. Rhodes

Ohio Legislature

Public Utilities Commission of Ohio

December 15, 1981

Ohio Department of Energy
Robert C. Masoner, Director

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An Assessment of the Supplies of Natural Gas
and Fuels for Generating Electricity in Ohio
from November 1981 - October 1982

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AN ASSESSMENT OF THE SUPPLIES OF NATURAL GAS AND FUELS FOR GENERATING ELECTRICITY IN OHIO

SUMMARY

Section 4905 of the Ohio Revised Code requires than on July 1 and November 1 of each year Ohio's natural gas and electric utilities report forecasts of their projected fuel supply and demand for the ensuing twelve-month period. The statute further requires that the Ohio Department of Energy (ODOE) review each report and compare it to the Department's independently generated forecasts. This report represents ODOE's assessment of these individual forecasts and provides an aggregate forecast of Ohio's natural gas and electricity supply/demand outlook for the period November 1, 1981 through October 30, 1982.

Electricity

For the twelve month period ending in September 1981, consumption of electricity in Ohio was 0.3 percent higher than during the previous twelve month period. Residential sector demand decreased 0.8 percent, commercial sector demand increased 2.6 percent, and industrial sector demand increased 0.7 percent. Ohio Department of Energy forecasts for the twelve month period ending October 1982 indicate that residential sector consumption will decline 1.8 percent. Commercial sector consumption is forecast to increase by 2.3 percent; and industrial sector consumption is forecast to decline 1.6 percent.

The projected supply of coal and oil is adequate under normal circumstances.

Natural Gas

Following the passage of the Natural Gas Policy Act of 1978, new customer hookup bans were lifted from all Ohio utilities by the end of 1979. However, natural gas utilization levels in residential, commercial, and industrial sectors declined in 1980, relative to 1979. The only sector where natural gas utilization established a consistent upward trend from 1978 on is the electric utilities sector, which accounts for less than 1.1 percent of the total natural gas utilization in Ohio.

The experience of the past two years clearly indicates that declining levels of natural gas utilization in Ohio are no longer due to curtailments of customer base allocations to apportion inadequate supplies. The four-fold increase in the price of natural gas between 1972 and 1980, as indicated in Table 19, and the eight-fold increase in the price of imported crude oil during the same period of time, have expanded the share demanded by energy expenditures in the budget and balance sheets of U.S. households and industry. This increase has been of such magnitude that the maintenance of a minimal customary level of discretionary expenditures on nonenergy items had required consumers to make continuing reductions in absolute levels of energy consumption. In other words, energy consumers are simply being priced out of the market, or, at least, out of their more costly habits. This is exactly what is expected to happen as the price mechanism undertakes the process of allocating a scarce resource.

However, in actual practice, there is always a question of information and implementation costs, and a consequent problem of public welfare, involved under these circumstances. It is not clear that the

customers who are being forced to reduce their energy consumption levels will be able to do so through the adoption of the most efficient and effective measures that could be available and feasible for them. This is the case because the information, training, or costs involved may exceed consumers' capabilities. The provision of conservation services, information, or programs by a single public authority can, however, improve public welfare, and expedite greater conservation, at a net gain to consumers who would be the beneficiaries of such services.

As long as energy prices outstrip the growth in real per capita income, there is reason to believe that energy consumption in general, and natural gas consumption in particular, will not exhibit sustained upward trends similar to those observed in the sixties. Significant fluctuations in sectoral natural gas consumption levels may be expected in response to severe climatic conditions, or in response to fluctuations in the general unemployment levels in Ohio.

For 1982, we expect that sectoral natural gas requirements will not significantly increase above their 1981 levels. Industrial requirements, however, may increase or decrease within a plus or minus 5 percent margin depending upon the alleviation or aggrevation of the current industrial unemployment levels in 1982.

Projected natural gas supplies for 1982 should be sufficient even in the case of a 10 percent colder than normal winter.

INTRODUCTION

This report has been prepared by the Ohio Department of Energy pursuant to Section 4905.14 (E) of the Ohio Revised Code. The statute requires the Department of Energy to provide a summary, analysis and recommendations based on the Ohio public utilities' energy supply and demand projections for the twelve-month period beginning November 1, 1981. In accordance with Section 4905.14 (D), a copy of each utility's November forecast was submitted to the Governor, Clerk of the Senate, the Legislative Clerk of the House of Representatives, and the Public Utilities Commission of Ohio on November 10, 1981. The utilities' forecasts and historical data are the primary input for this report. Several other sources of information have also been used, including historical energy data developed by the Ohio Department of Energy, federal energy reports, and publications from the American Gas Association and the Electric Power Research Institute. A substantial and successful effort has been undertaken to develop a comprehensive data base and at the same time maintain the ability to provide timely analyses and forecasts.

Objectives

In the preparation of this report, the Ohio Department of Energy set forth the following major objectives:

1. To provide an adequate historical, energy-related data profile for identification of current status and future trends;
2. To provide analysis and interpretation of changes in energy supply and demand;
3. To provide an independent assessment of the adequacy of natural gas and electric energy supply for the upcoming twelve months; and

4. If a potential deficiency between supply and demand is identified, to suggest a strategy for implementation in order to prevent or mitigate any interruption or curtailment of service.

The basis for the information to be evaluated is supplied in part by the reports filed with the Ohio Department of Energy, federal reports, and the research and analysis of the Ohio Department of Energy.

Temperature and Energy Consumption

Changes in the observed annual energy requirements of the three major consuming sectors may be explained by a variety of factors. Temperature is a variable which explains much of the observed variation. It is particularly significant in the residential and commercial sectors where, during summer and winter periods, the requirements for electricity and natural gas are used to maintain comfortable room temperatures.

Two indicators which measure temperature-sensitive energy requirements are heating degree days and cooling degree days. The daily mean temperature is obtained by adding together the maximum and minimum temperatures reported for the day and dividing the total by two. When the daily mean temperature is 65° F, the degree day is zero. Each degree of mean temperature <u>below</u> 65° F is counted as one heating degree day. This indicator is convenient because the amount of heat required to maintain a certain temperature level is proportional to heating degree days.

The cooling degree days are defined similarly: each degree of mean temperature above 65° F is counted as one cooling degree day. If the daily mean temperature is 65° F or lower, the cooling degree day total is zero.

Since most homes and commercial buildings in Ohio are heated by natural gas, the reporting gas utilities are required to submit supply and demand forecasts under a normal winter scenario and a ten percent colder than normal winter scenario. In addition, the relationship between natural gas consumption and heating degree days is closely monitored by ODOE during the winter heating season (from November through March). Table 1 and Figure 1 show, for the past two heating seasons, population-weighted state heating degree day summaries. In addition, a normal heating degree day series, defined as the 30 year average of the years 1941 to 1970, is presented.

On November 27, 1981, The National Weather Service issued a long-range forecast of precipitation and temperature for Ohio for the months December 1981 through February 1982. The forecast states that there is a fifty-five percent chance that precipitation will be normal during the period, and sixty-five percent chance that temperature will be colder than normal during the period.

<u>Rules and Requirements for This Report</u>

The administrative rules and forecasting requirements (OAC 1551:1-4 and 1551:1-5) became effective November 1, 1978. The present forecasting reports submitted by electric and gas utilities are in accordance with these rules.

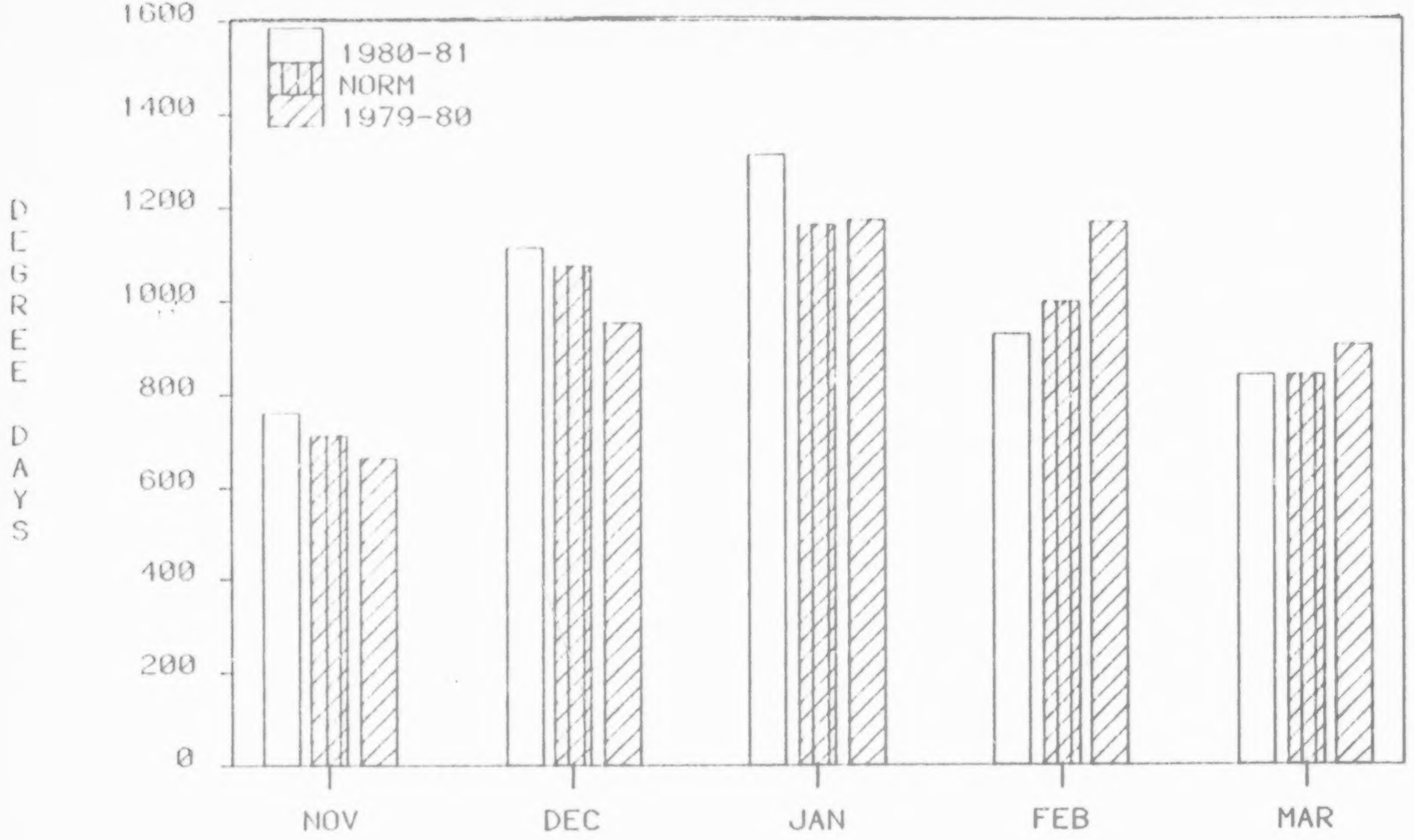
It is necessary to differentiate between state energy consumption and production totals and the reporting utilities' totals. This is because the municipal utilities, industrial facilities and the rural electric cooperatives are not required to file the semi-annual report. This difference is actually very small (estimated to be about 6 percent for the electricity figures and 1.7 percent for natural gas (excluding self-help gas).

Table 1. Population-Weighted State Degree-Day Summary for Ohio
November 1, 1980 to March 31, 1981

	1980-81			Norm			1979-80		
Week Ending Date	Weekly	Cum. for Month	Cum. from Nov. 1	Weekly	Cum. for Month	Cum. from Nov. 1	Weekly	Cum. for Month	Cum. from Nov. 1
Nov. 2	52	52	52	33	33	33	30	30	30
9	110	162	162	138	171	171	160	190	190
16	117	339	339	159	330	330	193	383	383
23	214	553	553	180	510	510	90	473	473
30	208	761	761	201	711	711	189	662	662
Deviation from Norm		7.0%	7.0%					-6.9%	-6.9%
Dec. 7	163	163	924	221	221	932	217	217	879
14	210	373	1134	237	458	1169	195	412	1074
21	296	669	1430	248	706	1417	238	650	1312
28	313	982	1743	256	962	1673	190	840	1502
31	127	1109	1870	111	1073	1784	109	949	1611
Deviation from Norm		3.4%	4.8%					-11.6%	-9.7%
Jan. 4	170	170	2040	149	149	1933	145	145	1756
11	384	554	2424	261	410	2194	266	411	2022
18	310	864	2734	263	673	2457	206	617	2228
25	232	1096	2966	261	934	2718	264	881	2492
31	216	1312	3182	224	1158	2942	290	1171	2782
Deviation from Norm		13.3%	8.2%					1.1%	-5.4%
Feb. 1	36	36	3218	37	37	2979	48	48	2830
8	324	360	3578	258	295	3274	336	384	3214
15	281	641	3859	254	549	3528	292	676	3506
22	128	769	3987	246	795	3774	246	922	3752
28	156	925	4143	201	996	3975	245	1167	4007
Deviation from Norm		-7.1%	4.2%					14.7%	0.8%
Mar. 1	26	26	4169	33	33	4008	41	41	4048
8	238	264	4407	218	251	4226	262	303	4310
15	190	454	4597	201	452	4427	227	530	4840
22	240	694	4837	183	635	4610	156	686	4996
29	129	823	4966	162	797	4772	174	860	5170
31	15	838	4981	40	837	4812	40	900	5210
Deviation from Norm		0.1%	3.5%					7.0%	7.6%

Source: National Weather Service, Port Columbus, and the Ohio Department of Energy.

FIGURE 1. POPULATION-WEIGHTED STATE DEGREE-DAYS FOR OHIO WINTER HEATING SEASONS 1979 - 1981



SOURCE: OHIO DEPARTMENT OF ENERGY

Ohio Department of Energy Forecasts

As part of its analysis, the Ohio Department of Energy makes independent forecasts to serve as validation checks. Early identification of severe conditions permits advanced planning to avert possible undesirable consequences.

The Ohio Department of Energy has the capability to forecast monthly demand by utility and for the state as a whole within a reasonable level of error (less than 5 percent in most cases). Such forecasts are based on historical month-by-month actual consumption for both electricity and natural gas and other appropriate variables such as population, income, and temperature data. As in any forecast, certain important socioeconomic conditions are assumed in the Ohio Department of Energy forecasts.

These assumptions are stated below:

1. Energy demand generally follows its historical consumption pattern.
2. Socio-economic changes are minimal in affecting demand for energy in the short run.
3. The observed level of conservation will remain in effect.
4. Other specific assumptions are stated where appropriate.

Overview of This Report

The rest of the report is divided into two parts: electric energy and natural gas. Materials contained in these two parts are, for the most part, parallel in arrangement. They contain: (a) a profile of reporting utilities; (b) historic sources of supplies/suppliers; (c) consumption history by sector, utility, and state; and (d) the utilities' forecasts and independent forecast by the Ohio Department of Energy. For the purpose of better illustration, the data are frequently displayed graphically.

ELECTRICITY

This section is based on the November forecasts filed by nine major Ohio electric utilities. Two of these, Columbus and Southern Ohio Electric Company and Ohio Power Company, are subsidiaries of the American Electric Power Company. Since American Electric Power operate as a centrally dispatched, integrated distribution system, the report reviews forecasts of demand and fuel adequacy for the entire American Electric Power System. The Allegheny Power System is also a centralized power generation and distribution system, of which one subsidiary is Monongehela Power. Thus, the forecasts of eight utilities are presented in the report. They are

1. Allegheny Power System (APS)

    Monongahela Power

    Other out-of-state utilities not subject to reporting

2. American Electric Power Company (AEP)

    Columbus and Southern Electric Company (C&SOE)

    Ohio Power Company

    Other out-of-state utilities not subject to reporting

3. Cincinnati Gas and Electric Company (CG&E)
4. Cleveland Electric Illuminating Company (CEI)
5. Dayton Power and Light Company (DP&L)
6. Ohio Edison Company (and its subsidiary Pennsylvania Power)
7. Ohio Valley Electric Corporation (OVEC)
8. Toledo Edison Company

With the exception of APS, AEP, and OVEC, each of these is an investor-owned utility supplying electricity to residential, commercial, and industrial customers in its service area. The Ohio Valley Electric

Corporation is a single-customer utility supplying power for the uranium enrichment plant at Portsmouth, Ohio. It also sells surplus generation to other electric utilities.

Source/Supplier of Fuel for Electric Generation

Fuels used in Ohio for electric generation include coal, oil, natural gas and nuclear fuel. At this time, nuclear fuel is not monitored by ODOE: all other fuels are monitored through the utilities' monthly reports. Tables 2 and 3 list coal and oil deliveries to power plants located in Ohio. The main sources of supply and/or suppliers of these fuels remain the same as in the last reporting period.

Coal deliveries to Ohio electric plants during the 1980-1981 heating season (November through March) declined 2.6 percent from the previous heating season, while deliveries of oil declined 38.7 percent. Over the first eight months of 1981, coal deliveries declined 19.4 percent compared with the first eight months of 1980. This decline is attributable primarily to the coal strike settled in June 1981. Oil deliveries declined 51.3 percent over the same period.

Electric Generation by Type of Fuel

Coal is the main source of fuel for electric generation in Ohio, and its position is not expected to change in the foreseeable future. Over the first nine months of 1981, 95.6 percent of total electricity generated in Ohio was from coal, an increase of 1 percent over a year ago: oil-generated electricity accounted for 1 percent, as it did in 1979: and nuclear-generated electricity accounted for 2 percent, a decrease of 1 percent from 1979. The amount of electricity generated from natural gas is very small compared to total generation. A boost in nuclear power generation in Ohio is expected in 1983, when the Zimmer facility is scheduled to come on line.

Table 2. Source of Coal Supply to Electric Utilities
(Ohio Portion)
(In Thousand Short Tons)

	Coal Districts								
Month	1	2	3	4	6	7&8	9	Other	Total
1979									
January	----	176.9	45.2	2,296.6	241.5	1,026.7	129.6	392.0	4,308.5
February	5.7	103.4	52.7	2,124.4	237.9	901.7	124.5	285.6	3,835.9
March	0.5	158.0	60.4	2,516.0	313.8	1,172.8	149.4	231.7	4,602.6
April	32.6	143.3	76.7	2,207.3	276.0	1,405.5	107.7	334.0	4,453.1
May	3.0	106.8	75.4	2,425.0	358.0	1,340.1	143.2	371.0	4,822.5
June	10.2	120.7	83.1	2,369.5	356.3	1,336.7	135.8	388.8	4,801.1
July	6.5	105.7	62.6	1,874.7	178.7	785.2	134.6	425.0	3,573.0
August	6.5	81.2	68.0	2,469.7	295.3	1,242.4	196.2	333.5	4,692.8
September	1.0	148.1	75.5	2,229.4	285.5	1,171.9	92.0	309.8	4,313.2
October	1.0	100.1	63.2	2,382.9	484.5	1,228.1	112.6	296.6	4,669.0
November	0.5	162.4	25.4	2.263.8	286.4	1,398.2	128.4	251.1	4,516.2
December	----	158.9	17.6	2,099.3	289.9	1,370.7	120.7	29.5	4,086.6
Total	67.5	1,565.5	705.8	27,258.6	3,603.8	14,380.0	1,574.7	3,648.6	52,804.5
% of Total	0.1	3.0	1.3	51.6	6.8	27.2	3.0	6.9	
1980									
January	----	210.9	27.0	2,202.8	327.2	1,140.8	131.5	316.8	4,357.0
February	----	136.3	46.9	1,872.3	500.9	964.9	100.1	216.8	3,838.2
March	----	200.4	34.8	2,114.1	126.9	1,485.5	94.6	356.6	4,412.9
April	----	254.1	44.7	2,096.0	215.9	1,216.8	66.1	200.8	4,094.4
May	0.1	165.1	49.0	2,225.2	270.1	1,252.5	125.4	167.8	4,255.2
June	----	158.4	56.[illegible]	2,111.3	291.9	1,501.7	159.0	165.4	4,444.2
July	----	151.3	47.1	1,932.9	173.1	892.3	72.8	201.3	3,470.8
August	----	182.6	78.8	2,164.6	261.6	1,295.8	115.1	242.1	4,340.6
September	----	217.5	78.7	2,124.4	275.2	1,286.4	81.5	118.3	4,182.0
October	----	202.1	95.1	2,164.[illegible]	265.1	1,388.9	103.4	56.1	4,275.3
November	----	161.5	107.6	1,958.0	261.1	1,094.6	38.8	155.8	3,777.4
December	----	212.4	103.7	2,070.7	233.1	1,130.3	73.3	251.9	4,075.4
Total	0.1	2,252.6	769.9	25,036.9	3,202.1	14,650.5	1,161.6	2,449.4	49,523.4
% of Total	0.0	4.5	1.6	50.6	6.5	29.6	2.3	4.9	

Table 2. Source of Coal Supply to Electric Utilities (Ohio Portion) (Cont'd)
(In Thousand Short Tons)

Month	Coal Districts								
	1	2	3	4	6	7&8	9	Other	Total
1981									
January	----	137.9	82.7	2,241.6	270.6	1,269.2	106.7	319.4	4,428.1
February	----	178.5	91.2	2,063.3	242.3	1,120.4	37.7	196.4	3,929.8
March	----	193.2	137.2	2,333.0	125.5	1,304.2	19.1	332.3	4,444.5
April	----	98.8	41.7	372.4	20.0	664.4	14.4	51.4	1,263.1
May	----	75.9	4.4	422.7	-----	753.8	1.5	-----	1,258.3
June	----	75.3	9.1	1,576.2	190.2	1,137.3	23.9	-----	3,012.0
July	----	157.6	63.6	2,247.1	242.7	874.4	42.4	238.6	3,866.4
August	----	174.5	76.0	2,351.3	361.9	1,191.5	49.9	376.7	4,581.8

District

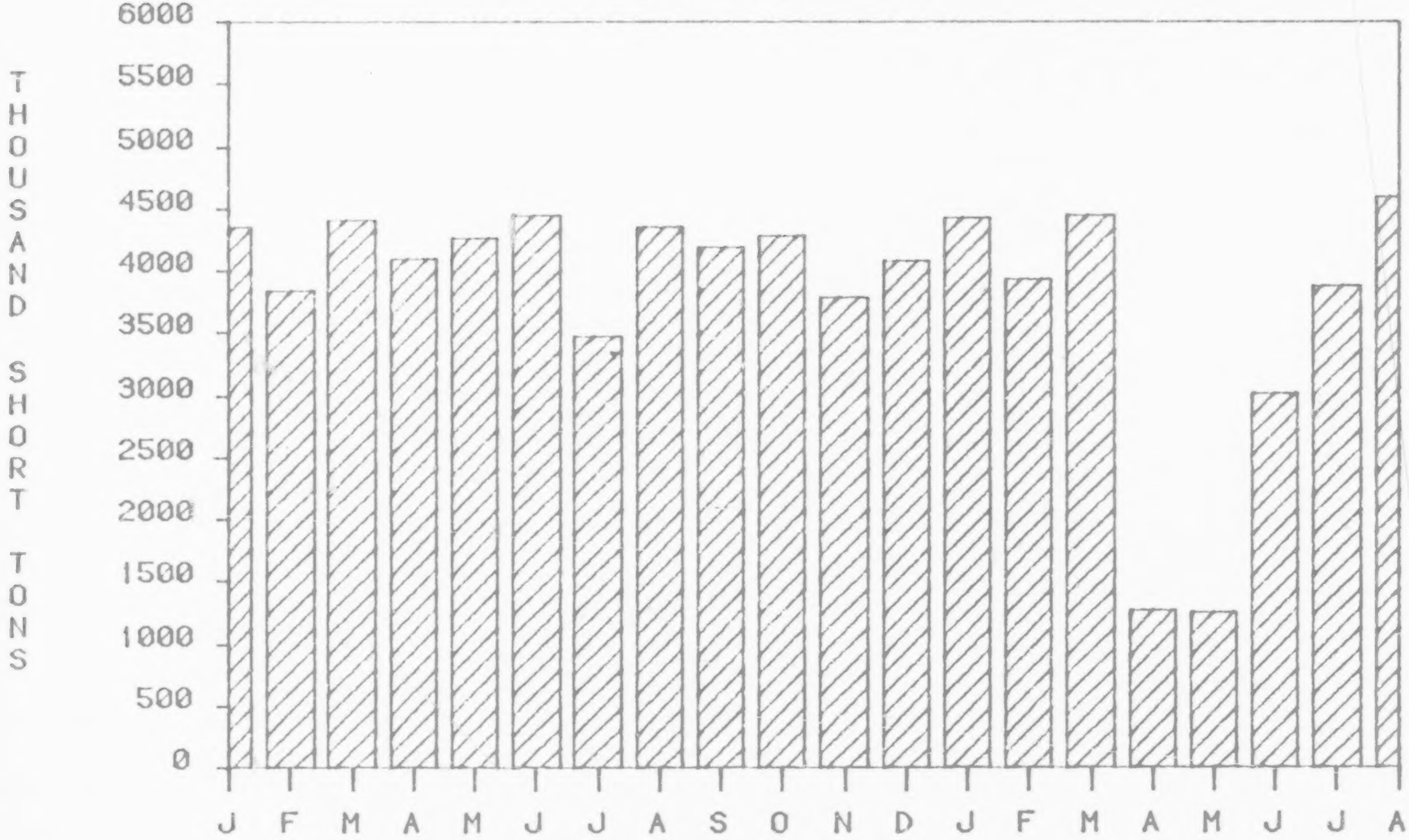
1. Eastern Pennsylvania
2. Western Pennsylvania
3. Northern West Virginia
4. Ohio
6. Panhandle in West Virginia
7. Southern No. 1 (in West Virginia and Virginia)
8. Southern No. 2 (in West Virginia, Virginia and Eastern Kentucky)
9. Western Kentucky

Other - Primarily from Wyoming and Utah

(For details, see Keystone Coal Industry Manual, 1977 by McGraw-Hill).

Source: Ohio Electric Utilities' FPC Form 423 and the Ohio Department of Energy.

FIGURE 2. MONTHLY COAL DELIVERIES TO POWER PLANTS IN OHIO
(JANUARY 1980 - AUGUST 1981)



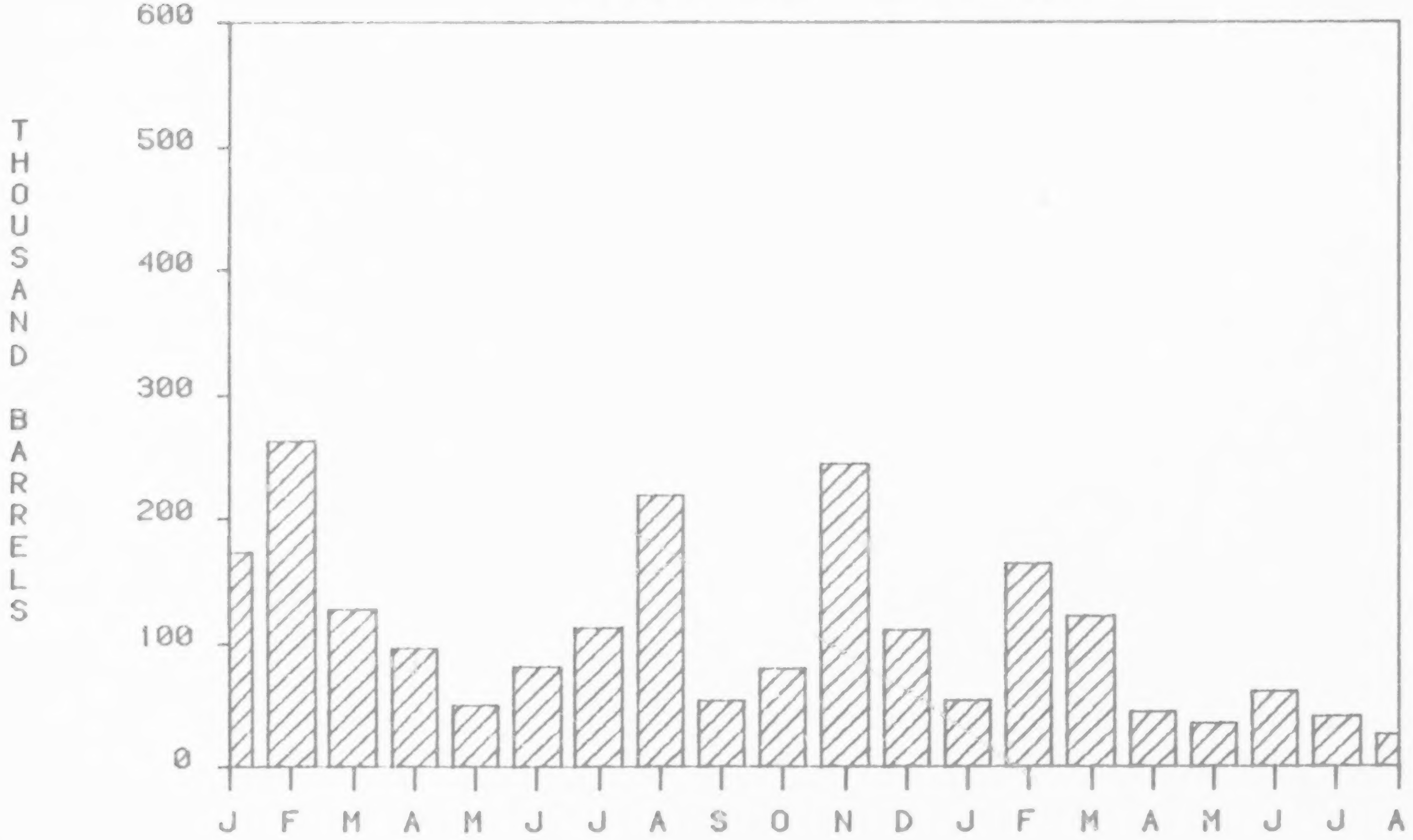
SOURCE: OHIO DEPARTMENT OF ENERGY

Table 3. Major Oil Suppliers to Electric Utilities
(Ohio Portion)
(Thousand Barrels)

1979	Allied	Marathon	McCarty	Standard	Union	Other	Total
January	342.3	4.1	0.6	27.1	14.5	29.1	417.7
February	357.6	3.2	12.5	41.2	19.5	56.2	491.2
March	346.1	1.5	4.6	23.3	12.3	1.6	389.4
April	289.9	0.8	--	13.1	2.6	20.6	327.1
May	172.5	1.5	--	18.0	1.6	12.8	206.4
June	206.8	0.4	--	22.5	2.8	16.5	249.0
July	236.8	0.2	--	16.6	4.4	0.5	258.5
August	120.6	0.4	--	31.8	2.6	--	155.4
September	102.7	0.4	--	29.4	2.4	--	134.9
October	126.3	9.4	--	30.3	6.1	2.7	174.8
November	216.9	1.3	--	34.4	1.9	17.3	271.8
December	242.1	0.5	--	46.4	4.8	2.8	296.6
Total	2,760.6	23.7	17.7	334.1	75.6	161.1	3,372.8
% of Total	81.8	0.7	0.5	9.9	2.2	4.8	
1980							
January	105.0	0.2	--	49.9	4.2	14.9	174.2
February	214.0	0.2	--	44.4	4.2	--	262.8
March	73.9	0.4	--	49.9	3.3	0.1	127.6
April	77.4	0.2	--	14.0	4.7	0.7	97.0
May	40.0	0.2	--	5.1	4.5	1.1	50.9
June	40.5	--	--	35.1	4.7	1.0	81.3
July	71.6	--	--	34.4	4.4	1.2	111.8
August	111.2	42.9	--	45.4	3.5	15.5	218.5
September	39.5	3.8	--	6.4	3.8	0.4	53.9
October	60.9	2.2	--	9.4	4.9	1.7	79.1
November	173.6	0.4	--	21.6	2.3	46.4	244.3
December	94.6	0.6	--	3.4	2.3	10.1	111.0
Total	1,102.4	51.1	--	319.0	46.8	92.2	1,612.4
% of Total	68.4	3.2		19.8	2.9	5.7	
1981							
January	32.6	1.0	--	0.7	3.6	16.0	53.9
February	141.8	--	--	4.0	2.6	15.6	164.0
March	93.8	0.2	--	4.5	4.9	17.9	121.3
April	36.4	0.2	--	4.4	1.8	2.3	45.1
May	28.5	0.2	--	3.4	2.5	0.7	35.3
June	53.4	--	--	4.7	2.6	1.1	61.8
July	31.8	0.2	--	5.3	2.4	0.8	40.5
August	22.0	--	--	3.9	--	0.2	26.1

Source: Ohio Electric Utilities' FPC Form 423 and the Ohio Department of Energy.

FIGURE 3. MONTHLY OIL DELIVERIES TO POWER PLANTS IN OHIO
(JANUARY 1980 - AUGUST 1981)



SOURCE: OHIO DEPARTMENT OF ENERGY

Table 4 and Figure 4 show the combined monthly totals of the reporting utilities' net generation from Ohio plants. Historical power plant fuel consumption and fuel stocks are displayed in Table 5. The build up and subsequent decline in coal stocks from mid 1980 through May 1981 was occasioned by a coal strike settled in June 1981.

Historical Patterns of Ohio Electric Consumption

Since the 1973 OPEC oil embargo and with the escalation of energy prices, the pattern of electricity consumption in Ohio has changed dramatically. Increasing prices have stimulated conservation activities and fostered economic conditions that have resulted in reduced growth rates in the demand for electricity. For the twelve month period ending in September 1981, total electricity consumption in the state was 0.3 percent higher than during the same period twelve months previous (see Table 6 and Figure 5). Residential sector demand was down 0.6 percent, commercial sector demand increased 2.6 percent and industrial sector demand increased 0.7 percent.

Electric consumption by the residential and commercial sectors exhibits strong seasonal patterns while the industrial sector fluctuates widely with general economic conditions. In July 1980, industrial electric consumption dipped to the lowest point in recent years, reflecting a severe downturn in the manufacturing industry and more specifically the automobile related industries. Since September, 1980, monthly industrial electricity consumption has remained rather stable, fluctuating around the 3900 gigawatt-hour level.

Twelve-Month Electric Energy Demand Forecast

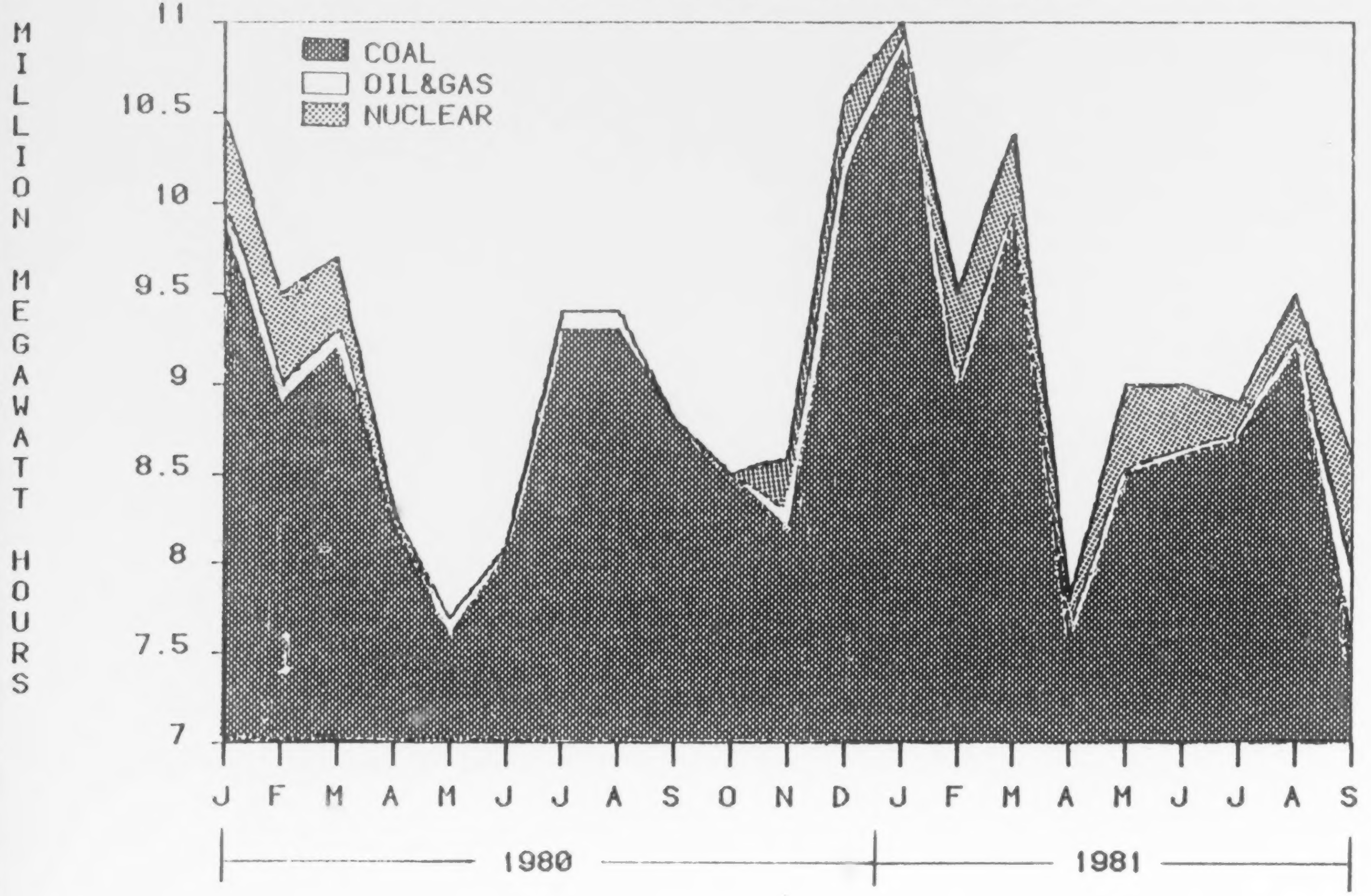
The electric demand forecast is prepared in two ways: 1) a utility by utility forecast is given, each forecast containing total projected demand for the utility's service area, which may or may not be located

Table 4. Major Ohio Utilities - Net Generation by Type of Fuel (Ohio Portion) (Thousand MWH)

	Coal		Oil		Gas	Nuclear		Total
1979								
January	10,092	(95%)	296	(3%)	9	260	(2%)	10,656
February	9,042	(92%)	315	(3%)	10	458	(5%)	9,825
March	9,263	(93%)	167	(2%)	6	505	(5%)	9,940
April	8,965	(99%)	87	(1%)	5	0		9,057
May	9,016	(99%)	94	(1%)	8	0		9,118
June	9,205	(98%)	140	(2%)	7	0		9,352
July	9,291	(95%)	78	(1%)	8	389	(4%)	9,766
August	9,613	(93%)	57	(1%)	3	642	(6%)	10,316
September	9,126	(94%)	59	(1%)	6	478	(5%)	9,669
October	8,481	(95%)	119	(1%)	11	304	(3%)	8,915
November	8,922	(97%)	141	(2%)	20	128	(1%)	9,210
December	9,937	(99%)	93	(1%)	11	0		10,040
Total	115,864	(96%)	1,646	(1%)	104	3,164	(3%)	115,868
1980								
January	9,863	(94%)	92	(1%)	14	501	(5%)	10,472
February	8,865	(94%)	94	(1%)	13	480	(5%)	9,453
March	9,192	(95%)	81	(1%)	14	419	(4%)	9,706
April	8,204	(99%)	11	(0%)	5	99	(1%)	8,320
May	7,565	(100%)	27	(0%)	8	0		7,600
June	8,112	(100%)	27	(0%)	10	0		8,149
July	9,289	(99%)	67	(1%)	10	0		9,366
August	9,342	(99%)	101	(1%)	41	0		9,484
September	8,781	(100%)	36	(0%)	3	0		8,820
October	8,516	(100%)	29	(0%)	5	0		8,549
November	8,248	(95%)	86	(1%)	36	316	(4%)	8,687
December	10,230	(97%)	51	(0%)	78	304	(3%)	10,593
Total	106,207	(97%)	702	(1%)	237	2,119	(2%)	109,199
1981								
January	10,864	(99%)	38	(0%)	8	58	(1%)	10,968
February	9,032	(94%)	23	(0%)	7	513	(5%)	9,576
March	9,876	(95%)	31	(0%)	13	451	(4%)	10,371
April	7,646	(98%)	3	(0%)	2	160	(2%)	7,810
May	8,547	(94%)	19	(0%)	10	477	(5%)	9,054
June	8,555	(96%)	18	(0%)	11	363	(4%)	8,947
July	8,711	(97%)	17	(0%)	12	200	(2%)	8,941
August	9,156	(97%)	5	(0%)	1	313	(3%)	9,505
September	7,596	(88%)	4	(0%)	412	606	(7%)	8,619

Source: Ohio Electric Utilities' FPC Form 4 and the Ohio Department of Energy.

FIG. 4. MAJOR OHIO ELECTRIC UTILITIES NET GENERATION BY TYPE OF FUEL (OHIO PORTION)



SOURCE: OHIO DEPARTMENT OF ENERGY

Table 5. Major Ohio Electric Utilities Fuel Consumption and Stocks (Ohio Portion)

	Coal (Thousand Tons)		Oil (Thousand 42-Gal.Bbls)		Gas (MMCF)
1979	Burned	In Stock	Burned	In Stock	Burned
January	4,756.0	9,016.0	676.6	1,115.1	315
February	4,235.9	8,606.1	798.7	1,009.7	537
March	4,318.9	8,856.2	429.3	1,079.5	443
April	4,076.1	9,529.4	238.9	1,247.6	285
May	4,141.3	10,199.1	242.8	1,193.6	383
June	4,328.6	10,659.5	366.0	1,134.7	353
July	4,401.2	9,758.4	404.9	1,135.2	207
August	4,523.1	9,898.0	184.2	1,329.8	233
September	4,243.5	10,064.0	169.7	1,526.5	372
October	3,867.7	10,883.0	301.7	1,284.7	377
November	4,103.2	11,276.5	435.5	1,182.9	398
December	4,497.2	10,846.2	222.1	1,365.2	266
Total	51,492.0	---	4,470.4	---	4,169
Avg/Month	4,291.0	9,966.0	372.5	1,217.0	347
1980					
January	4,459.8	10,083.3	246.7	1,347.0	317
February	3,935.4	11,351.4	258.2	1,308.6	316
March	4,098.0	11,187.8	181.7	1,247.4	354
April	3,639.8	11,806.2	94.9	1,360.4	129
May	3,396.6	12,897.9	104.1	1,289.3	132
June	3,665.3	13,631.9	108.5	1,282.5	261
July	4,249.1	12,928.8	206.7	1,253.3	301
August	4,336.7	13,114.2	297.6	1,399.9	799
September	3,928.1	13,309.7	123.9	1,097.7	994
October	3,836.1	13,724.7	116.2	1,110.0	123
November	3,738.9	13,811.6	249.9	1,076.8	717
December	4,633.3	13,351.4	181.8	1,048.7	204
Total	47,917.2	---	2,170.2	---	4,647
Avg/Month	3,993.1	12,599.9	180.9	1,235.1	387
1981					
January	4,906.0	12,454.4	143.3	1,055.4	166
February	4,104.6	12,373.3	111.8	1,099.1	164
March	4,456.5	12,464.5	112.2	1,174.3	121
April	3,458.7	10,302.7	70.4	1,154.3	63
May	3,937.0	7,537.9	107.6	1,116.7	119
June	3,971.2	6,742.2	89.0	1,106.1	190
July	3,688.8	6,350.9	99.5	889.6	271
August	4,189.7	7,377.8	60.3	880.1	52
September	3,449.9	8,310.6	50.1	785.9	69

Source: FPC Form 4 of the major electric utilities and the Ohio Department of Energy.

Table 6. Ohio Electricity Consumption
October 1980 - September 1981
(Thousand MWH)

	October	November	December	January	February	March
Residential						
1980-81	2,012.9	2,193.3	2,699.3	3,333.8	2,962.9	2,603.3
1979-80	1,964.1	2,175.4	2,541.1	2,946.4	2,978.8	2,827.9
% Change*	2.5	0.8	6.2	13.1	-0.5	-7.9
Commercial						
1980-81	1,617.6	1,579.3	1,721.2	1,902.9	1,793.0	1,700.4
1979-80	1,547.2	1,550.2	1,642.2	1,732.7	1,785.8	1,720.5
% Change*	4.6	1.9	4.8	9.8	0.4	-1.2
Industrial						
1980-81	3,910.3	3,823.2	3,918.8	3,861.1	3,952.8	4,048.0
1979-80	4,132.3	4,032.8	3,920.5	4,055.4	4,143.9	4,196.2
% Change*	-5.4	-5.2	0.0	-4.8	-4.6	-3.5
Other						
1980-81	465.0	470.5	506.1	507.8	502.2	506.5
1979-80	461.0	458.7	478.4	509.7	511.4	500.6
% Change*	1.1	2.6	5.8	-0.4	-1.8	1.2
Total						
1980-81	8,006.7	8,066.3	8,845.4	9,605.6	9,210.9	8,858.2
1979-80	8,104.6	8,217.1	8,582.2	9,244.2	9,419.9	9,245.0
% Change*	-1.2	-1.8	3.1	3.9	-2.2	-4.2
Customers (000)						
Residential	3,433.8	3,439.2	3,422.4	3,448.0	3,451.2	3,450.8
Commercial	351.7	352.1	350.7	352.1	352.2	352.5
Industrial	23.0	23.0	23.0	23.0	23.1	23.3
Total	3,808.5	3,814.3	3,816.1	3,823.1	3,826.5	3,826.6

*Percentage change is from the same period of the previous year (1979-1980).

Notes: (1) Excludes sales to other utilities.

(2) Figures may not add to exact totals because of independent rounding.

(3) Figures reported include CG&E, CEI, C&SOE, DP&L, Monongahela Power, Ohio Edison, Ohio Power, and Toledo Edison.

Source: Ohio Electric Utility Institute's Monthly Summaries.

Table 6 Ohio Electricity Consumption (Continued)
October 1980 - September 1981
(Thousand MWH)

	April	May	June	July	August	September	Total
Residential							
1980-81	2,179.5	1,985.8	2,065.1	2,521.2	2,370.1	2,197.2	29,124.4
1979-80	2,374.0	1,947.0	1,942.6	2,430.9	2,732.3	2,510.8	29,370.1
% Change*	-8.2	+2.0	+6.3	+3.7	-13.2	-12.5	-0.8
Commercial							
1980-81	1,594.1	1,565.2	1,758.1	1,989.6	1,906.0	1,849.5	20,976.9
1979-80	1,596.7	1,520.0	1,627.2	1,860.3	1,960.9	1,891.8	20,435.5
% Change*	-0.2	+3.0	+8.0	+6.9	-2.8	-2.2	+2.6
Industrial							
1980-81	3,927.2	3,930.4	4,006.0	3,898.7	4,011.1	3,843.9	47,131.5
1979-80	4,006.3	3,784.2	3,617.4	3,485.2	3,628.8	3,787.3	46,790.3
% Change*	-2.0	+3.9	+10.7	+11.8	+10.5	+1.5	+0.7
Other							
1980-81	420.6	390.7	407.1	401.3	382.5	408.3	5,368.5
1979-80	462.4	445.2	443.2	470.4	479.2	441.4	5,691.6
% Change*	-9.0	-12.2	-8.1	-14.7	-20.1	-13.3	-5.7
Total							
1980-81	8,121.4	7,872.1	8,236.6	8,810.8	8,669.6	8,298.9	102,602.5
1979-80	8,439.5	7,696.5	7,630.6	8,246.7	8,801.2	8,661.1	102,288.6
% Change*	-3.8	+2.3	+7.9	+6.8	-1.5	-13.3	+0.3
Customers (000)							
Residential	3,449.7	3,449.3	3,447.2	3,445.1	3,446.5	3,447.7	
Commercial	352.8	353.4	353.1	352.9	353.3	353.5	
Industrial	23.3	23.4	23.4	23.3	23.4	23.5	
Total	3,825.8	3,826.1	3,823.6	3,821.3	3,823.3	3,824.7	

*Percentage change is from the same period of the previous year (1979-1980).

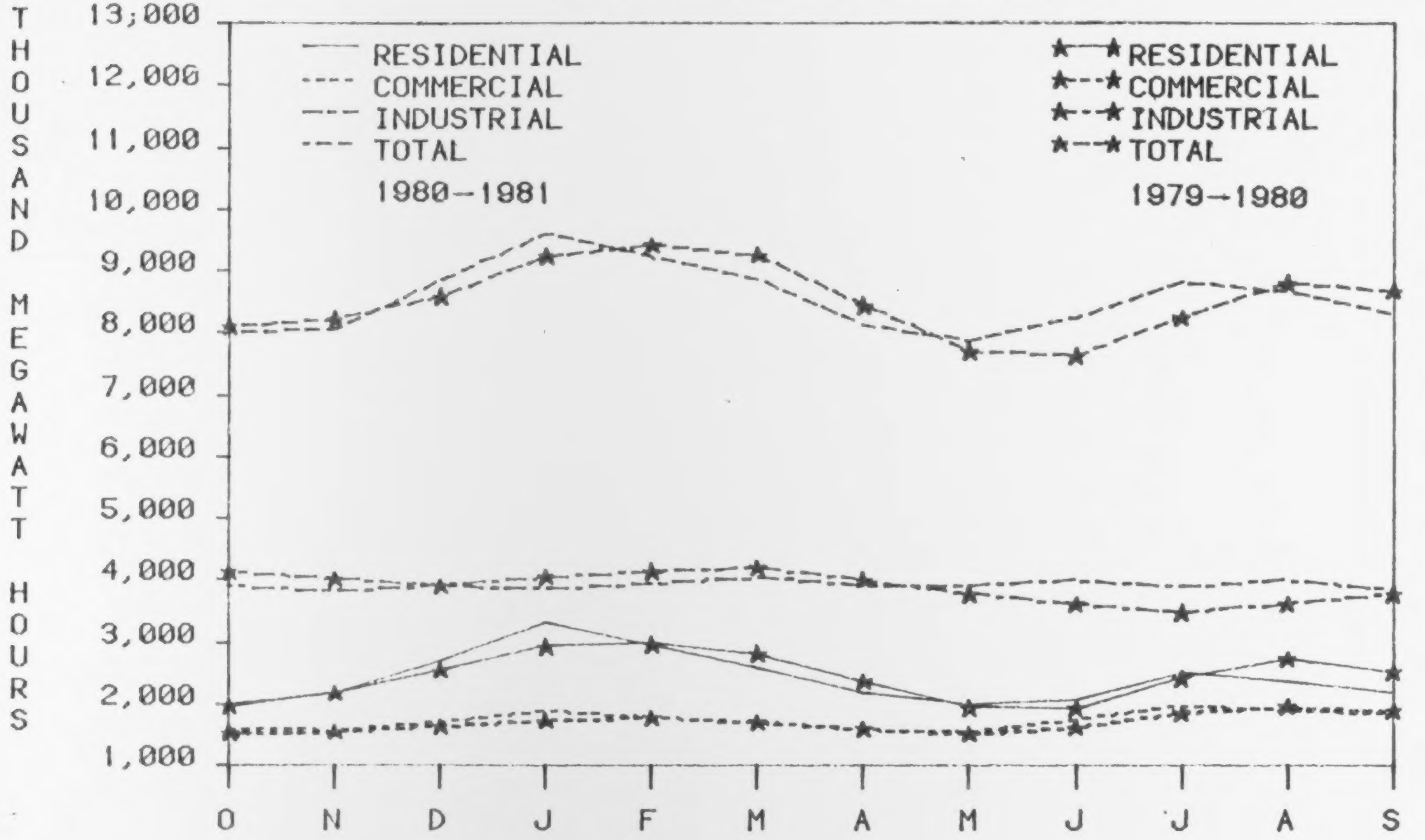
Notes: (1) Excludes sales to other utilities.

(2) Figures may not add to exact totals because of independent rounding.

(3) Figures reported include CG&E, CEI, C&SOE, DP&L, Monongahela Power, Ohio Edison, Ohio Power, and Toledo Edison.

Source: Ohio Electric Utility Institute's Monthly Summaries.

FIG. 5. COMPARISON OF OHIO ELECTRICITY CONSUMPTION BY SECTOR
OCTOBER 1979 - SEPTEMBER 1981



SOURCE: OHIO DEPARTMENT OF ENERGY.

entirely within Ohio; and 2) an aggregate demand for electricity within the state of Ohio is forecasted by sector (residential, commercial and industrial).

Electric Demand Forecast by Utility Service Area

For each utility service area, two electric demand forecasts are provided. One of the forecasts is a reporting utility forecast and the other is provided by the Ohio Department of Energy (Appendix A, Tables A-1 through A-9).

The Ohio Department of Energy forecasts are based on monthly data from the utility reports between January 1970 and September 1981. No independent forecast is given for OVEC because this utility has only one customer whose demand is preplanned.

Because of the overlapping months for the forecasts prepared on July 1 and November 1, the utilities may elect to use their last forecasts for those overlapping months in the new forecasting period. Only the Dayton Power and Light Company and the Ohio Valley Electric Corporation chose to retain their earlier forecasts for November 1981 through June 1982. The American Electric Power Company and Toledo Edison revised each of their monthly forecasts downward.

Utility forecasts of monthly demand for November 1981 through October 1982 are for the most part higher than those prepared by the Ohio Department of Energy. The only exceptions to that pattern are forecasts of demand of the Ohio Edison System and the Toledo Edison Company. Demand forecasts of the Ohio Department of Energy for the American Electric Power Company are much lower than forecasts prepared by the utility (see Tables A-1 through A-8).

Electric Demand Forecast By Sector

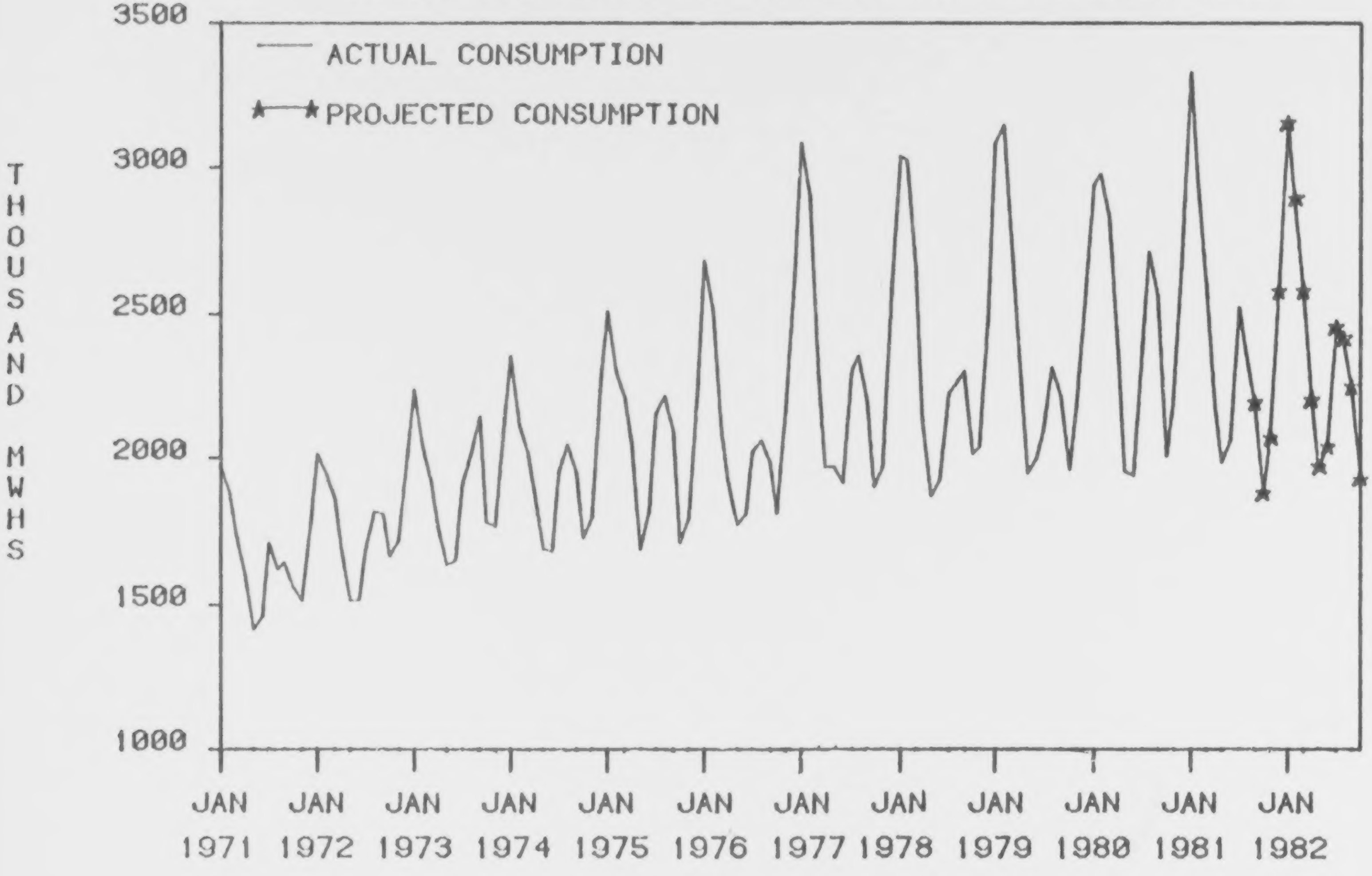
Except for OVEC, Ohio's demand for electricity from all eight major reporting utilities may be estimated based on monthly consumption data from January 1971 through September 1981 (Table 6 and Figures 5 through 9). For each sector, this period provides a time series of 129 observations. Based on these observations, a forecasting model is constructed to generate a monthly forecast for the future months through October 1982. These sectoral forecasts are included in Appendix A, Tables A-9 through A-12.

The total Ohio demand forecast indicates that, with the exception of September, demand will be lower in every month than it was in the previous year (Table A-12). The residential sector demand forecast projects lower demand than the previous year for each month with the exceptions of April, August, and September 1982 (Table A-9). Commercial sector demand is forecast to increase in each month of the forecasting period over the same month of the previous year, with the exception of July (Table A-10). Industrial sector demand is forecast to decrease from 0.9 to 4.2 percent each month over the previous year from December 1981 through August 1982 (Table A-11).

Assessment of Fuel Adequacy by Utility/Utility Group

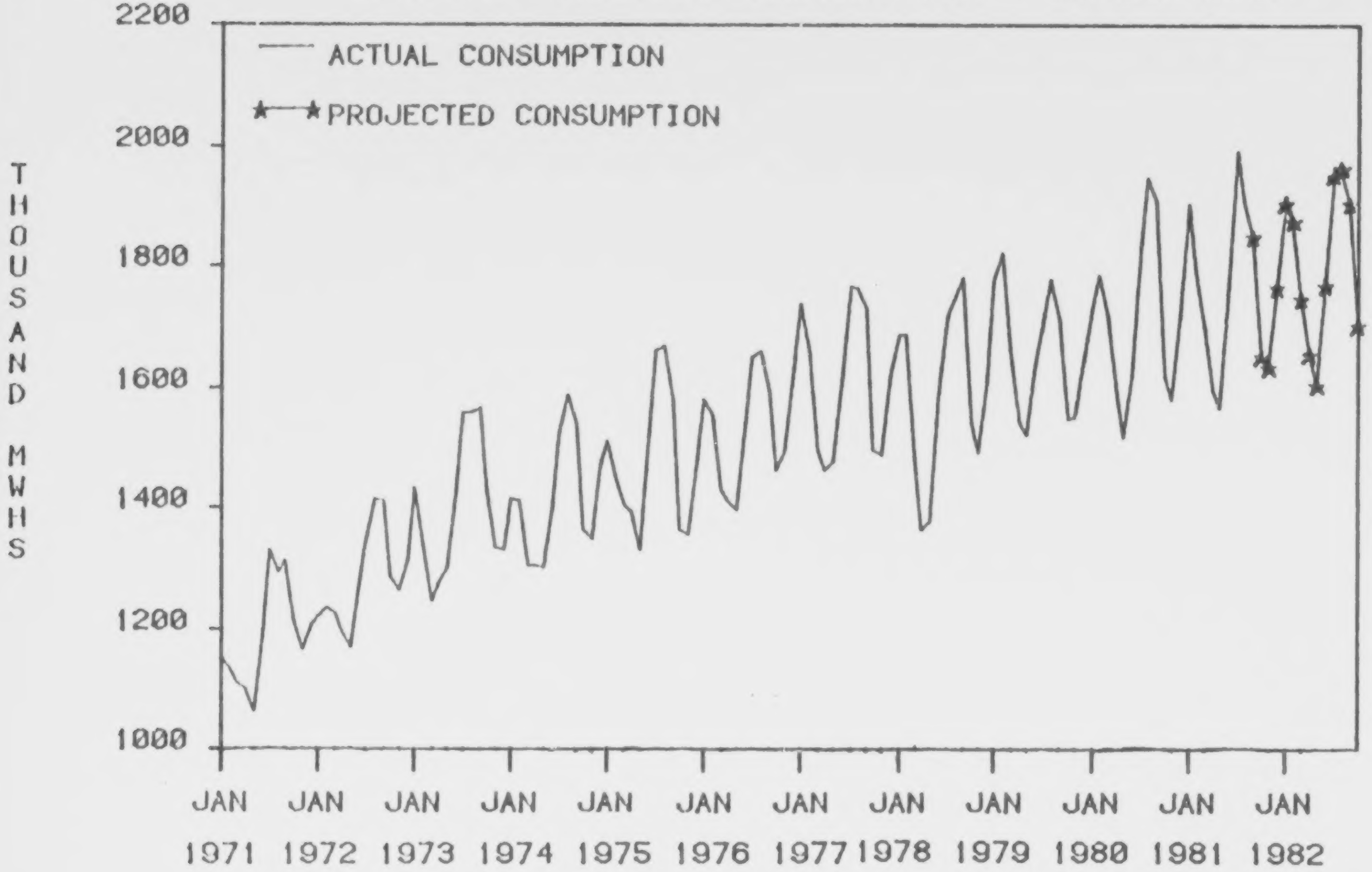
Average daily requirements of coal were determined by dividing projected monthly coal consumption by the number of days in the month. End-of-month stocks were derived by considering consecutively end of October 1981 stocks, projected monthly coal delivery schedules as submitted by the utilities, and projected monthly coal consumption levels. Number of days' supply of coal was estimated on the basis of average daily requirements in subsequent months and the level of end-of-month stocks for the month in question.

FIG. 6. MONTHLY OHIO RESIDENTIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1971 - OCTOBER 1982)



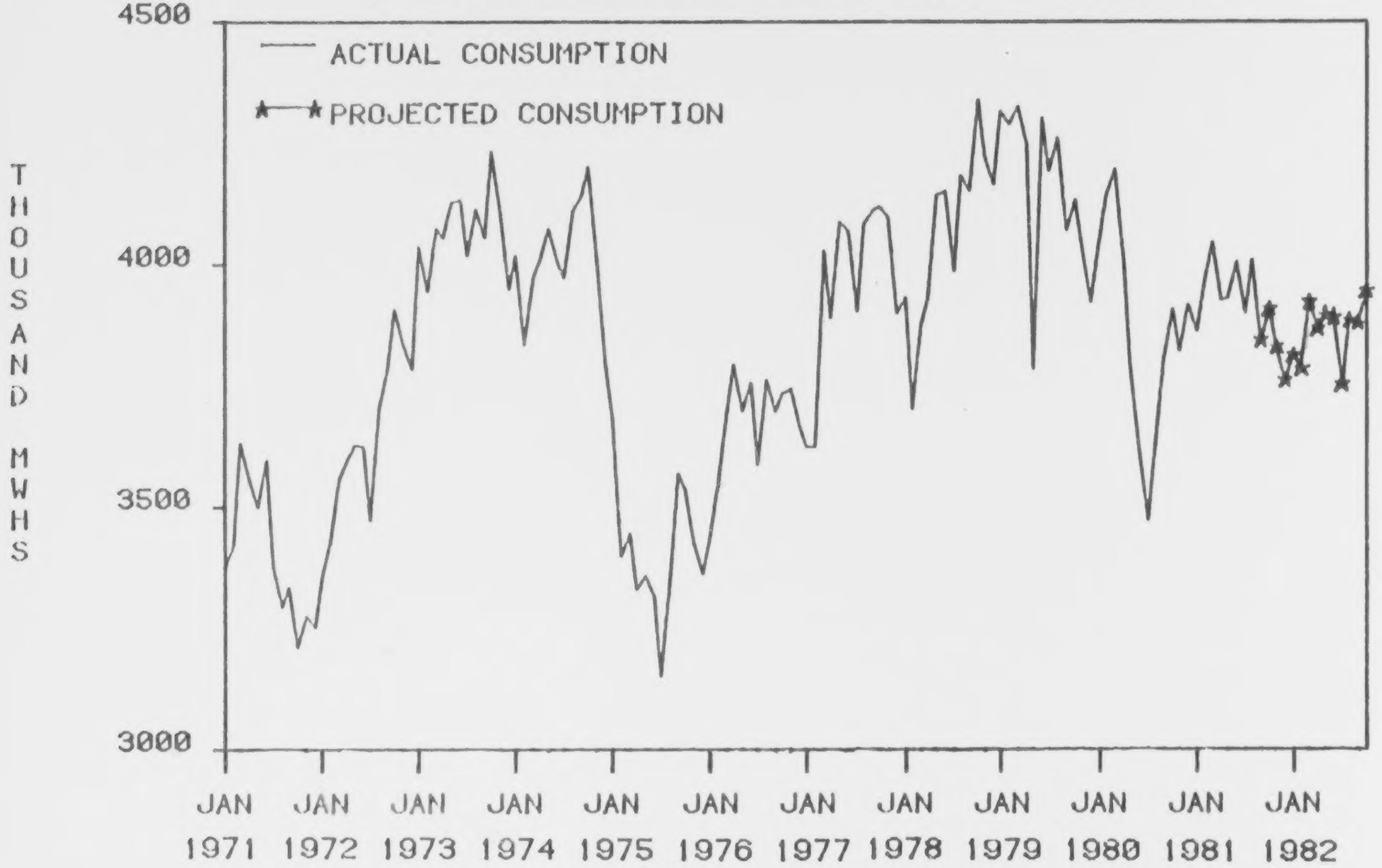
SOURCE: OHIO ELECTRIC UTILITY INSTITUTE AND THE OHIO DEPARTMENT OF ENERGY.
(EXCLUDING OVEC)

FIG. 7. MONTHLY OHIO COMMERCIAL ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1971 - OCTOBER 1982)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE AND THE OHIO DEPARTMENT OF ENERGY.
(EXCLUDING OVEC)

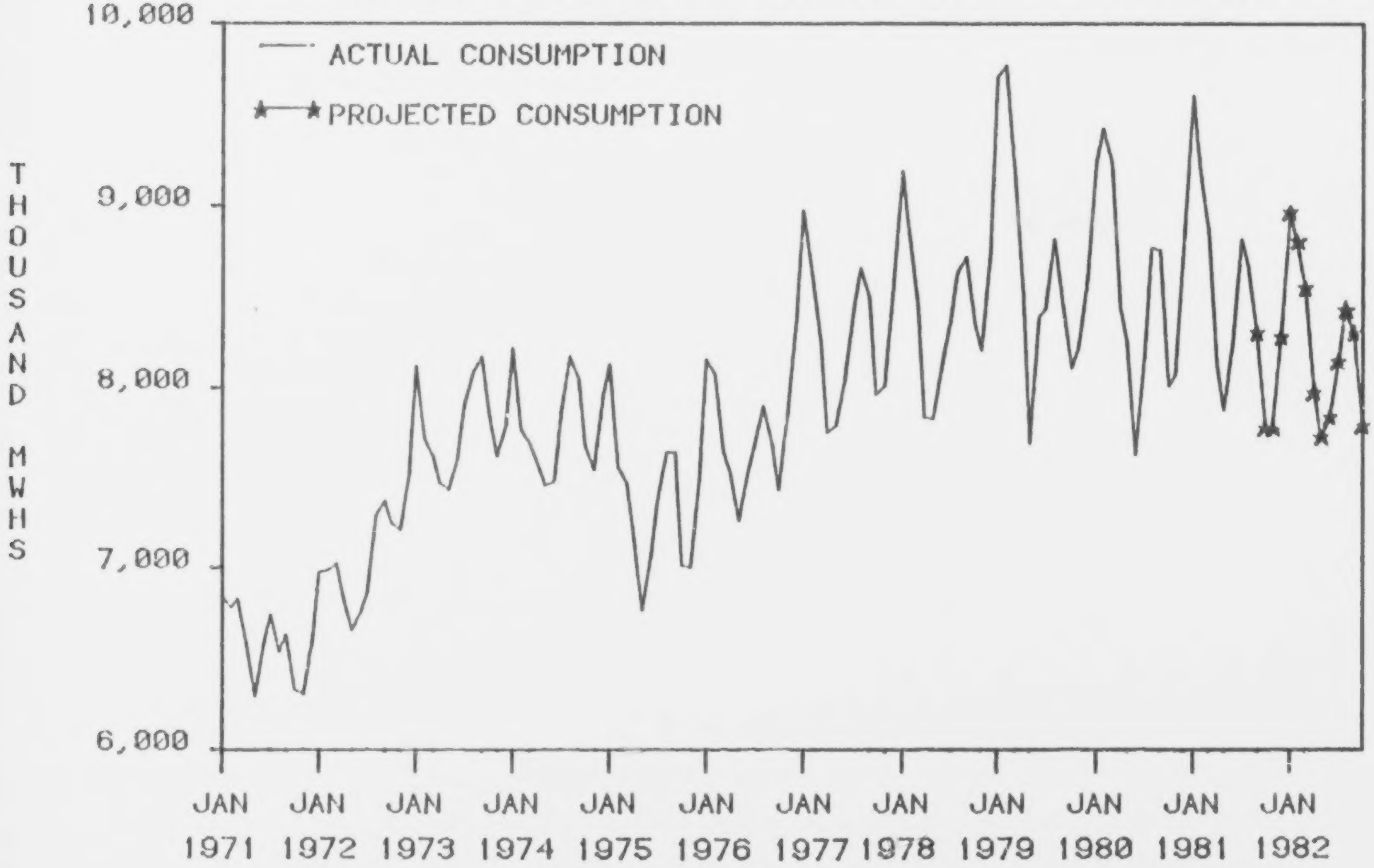
FIG. 8. MONTHLY OHIO INDUSTRIAL ELECTRICITY CONSUMPTION ACTUAL AND PROJECTED (JANUARY 1971 - OCTOBER 1982)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE AND THE OHIO DEPARTMENT OF ENERGY.

(EXCLUDING OVEC)

FIG. 9. TOTAL MONTHLY ELECTRICITY CONSUMPTION
ACTUAL AND PROJECTED (JANUARY 1971 - OCTOBER 1982)



SOURCE: OHIO ELECTRIC UTILITY INSTITUTE AND THE OHIO DEPARTMENT OF ENERGY

(EXCLUDING OVEC)

Coal consumption projections were made through the use of a formula which adjusts coal consumption levels for changes in the consumption of oil, natural gas, and nuclear fuel in a manner that is consistent with the projected demand or net energy for load. In making these projections it is assumed that the following conditions will be satisfied:

1. Monthly demand (net energy for load) for November 1981 through October 1982 will be realized in the manner projected by the utility companies.
2. Energy required to supply projected net energy for load in a given month of November 1981 through October 1982 will be proportional to the energy consumed in supplying the actual net energy for load in the respective months of November 1980 through October 1981.
3. Monthly delivery schedules for all fuels in 1981 through 1982 will be met in the manner projected by the utility companies.

Table 7 presents forecast generation by fuel, projected daily consumption of fuel, projected fuel deliveries, projected end-of-month fuel stocks, and estimated remaining days of coal supply by utility. Forecast supplies of fuel for electricity generation are adequate in the case of every utility.

The assessment of oil adequacy is derived by using utilities' projected monthly consumption and deliveries. The projected deliveries are low when compared to the consumption levels experienced in the 1970's. Oil deliveries are believed sufficient, however, since the utilities have demonstrated their ability to reduce fuel oil consumption dramatically since the late 1970's. For the twelve month period from October 1980 through September 1981, utility consumption of oil was 19.0 percent lower than in the preceding twelve month period.

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (November 1981 - October 1982)

ALLEGHENY POWER SYSTEM

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	2732.3	3026.2	3261.7	2841.2	2865.4	2663.1	2657.2	2614.7	2673.0	2790.5	2620.0	2799.1	33544.3
EST DEMAND GEN BY COAL	3142.1	3692.0	3848.8	3210.6	3237.9	3275.6	1950.4	2110.1	3421.4	3348.6	3170.2	3386.9	37794.5
EST DEMAND GEN BY OIL	0.0	0.0	6.5	5.7	0.0	0.0	0.0	18.3	0.0	0.0	0.0	0.0	30.5
EST DEMAND GEN BY GAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	0.0	10.5
EST DEMAND GEN BY HYDRO	13.7	15.1	6.5	22.7	20.1	26.6	23.9	28.8	8.0	5.6	0.0	0.0	171.0
PROJ DAILY CONSUMPTION													
COAL (KTONS)	43.05	48.95	51.03	47.13	42.93	44.88	25.86	28.91	45.36	44.40	43.43	44.90	
OIL (KBBL)	0.0	0.0	0.87	0.84	0.0	0.0	0.0	2.51	0.0	0.0	0.0	0.0	
COAL DELIVERIES (KTONS)	1431.5	1425.2	1451.3	1420.9	1404.0	1414.7	1432.9	1441.1	1319.9	1311.2	1340.5	1298.8	16692.1
OIL DELIVERIES (KBBL)	9.22	9.22	21.20	21.20	21.20	21.20	21.20	21.20	21.20	21.20	21.20	21.20	230.45
END OF MONTH STOCK													
COAL (KTONS)	1657.8	1565.7	1435.1	1536.5	1609.7	1678.1	2309.4	2883.3	2797.0	2732.0	2769.5	2676.3	
OIL (KBBL)	431.1	440.3	434.7	432.5	453.7	474.9	496.1	441.9	463.1	484.3	505.5	526.7	
NUMBER OF DAYS SUPPLY													
COAL	34.	31.	31.	36.	40.	61.	62.	64.	64.	62.	62.	60.	

AMERICAN ELECTRIC POWER SYSTEM

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	7226.0	8140.0	8875.0	8214.0	7890.0	7063.0	7007.0	6932.0	7306.0	7621.0	7111.0	7319.0	90703.9
EST DEMAND GEN BY COAL	7587.3	9116.8	******	8871.1	8915.7	7981.2	8758.7	7971.8	8328.8	8002.0	6072.8	6250.4	97385.4
EST DEMAND GEN BY NUC	751.5	1107.0	1473.2	1593.5	1159.8	854.6	945.9	762.5	562.6	1379.4	1287.1	1324.7	13202.0
EST DEMAND GEN BY HYDRO	21.7	48.8	35.5	65.7	47.3	63.6	70.1	48.5	29.2	22.9	21.3	22.0	496.6
PROJ DAILY CONSUMPTION													
COAL (KTONS)	113.40	131.87	145.06	142.06	128.96	119.29	126.69	119.15	120.47	115.75	90.77	90.41	
COAL DELIVERIES (KTONS)	4290.0	4573.0	3922.0	3913.0	4413.0	3946.0	3804.0	4129.0	2384.0	4249.0	4074.0	4070.0	47767.0
END OF MONTH STOCK													
COAL (KTONS)	9258.9	9743.9	9169.0	9104.2	9519.4	9886.6	9763.2	******	8967.0	9627.9	******	******	
NUMBER OF DAYS SUPPLY													
COAL	67.	69.	69.	73.	78.	81.	82.	95.	90.	106.	121.	135.	

Note:***** indicates value greater than 10000.

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (November 1981 - October 1982) (Cont'd)

CINCINNATI GAS & ELECTRIC

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	1261.3	1460.9	1497.3	1301.1	1343.2	1165.5	1237.1	1407.3	1594.0	1619.3	1321.2	1212.3	16420.6
EST DEMAND GEN BY COAL	938.4	1196.5	1338.6	1069.5	926.8	944.0	1036.7	1435.4	1517.5	1425.0	1294.7	1188.1	14311.2
EST DEMAND GEN BY OIL	1.3	4.4	1.5	1.3	1.3	1.2	2.5	4.2	3.2	1.6	1.3	1.2	25.0
PROJ DAILY CONSUMPTION													
COAL (KTONS)	14.47	17.85	19.97	17.67	13.83	14.55	15.47	22.13	22.64	21.26	19.96	17.73	
OIL (KBBL)	0.22	0.75	0.26	0.25	0.23	0.21	0.42	0.74	0.54	0.28	0.23	0.21	
COAL DELIVERIES (KTONS)	580.5	658.7	635.8	526.8	614.5	572.2	463.8	585.9	670.9	650.5	576.4	449.2	6985.2
OIL DELIVERIES (KBBL)	0.0	3.80	9.00	1.30	51.80	0.90	4.00	14.40	40.90	91.40	39.90	6.80	264.20
END OF MONTH STOCK													
COAL (KTONS)	1174.5	1279.8	1296.5	1328.7	1514.5	1650.1	1634.4	1556.4	1525.5	1517.0	1494.5	1394.2	
OIL (KBBL)	209.0	189.6	190.7	185.1	229.8	224.6	215.5	207.5	231.6	314.4	347.3	347.7	
NUMBER OF DAYS SUPPLY													
COAL	62.	71.	85.	91.	88.	83.	74.	72	76.	82.	84.	79.	

CLEVELAND ELECTRIC ILLUMINATING COMPANY

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	1554.0	1681.0	1729.0	1607.0	1679.0	1533.0	1587.0	1653.0	1687.0	1720.0	1619.0	1621.0	19670.0
EST DEMAND GEN BY COAL	1134.4	1092.6	1123.8	1176.3	1128.3	996.4	1117.2	1176.9	1120.2	1123.2	1052.3	1053.6	13295.5
EST DEMAND GEN BY OIL	9.3	16.8	15.6	1.6	11.8	0.0	4.8	5.0	8.4	0.0	0.0	0.0	73.2
PROJ DAILY CONSUMPTION													
COAL (KTONS)	16.27	15.17	15.60	18.08	15.66	14.29	15.51	16.88	15.55	15.59	15.09	14.63	
OIL (KBBL)	0.69	1.20	1.11	0.13	0.84	0.0	0.34	0.37	0.60	0.0	0.0	0.0	
COAL DELIVERIES (KTONS)	460.7	501.6	460.8	471.9	495.1	459.0	428.7	469.0	467.4	471.8	446.9	473.2	5606.1
OIL DELIVERIES (KBBL)	48.40	24.29	85.76	72.21	95.02	19.67	57.93	83.17	76.83	61.71	77.05	76.29	778.33
END OF MONTH STOCK													
COAL (KTONS)	914.3	945.7	923.0	888.7	898.3	928.5	876.5	839.0	824.4	812.9	807.0	826.8	
OIL (KBBL)	476.7	463.7	515.0	583.6	652.6	672.3	719.6	791.8	849.9	911.6	988.7	1065.0	
NUMBER OF DAYS SUPPLY													
COAL	59.	57.	55.	59.	60.	58.	54.	54.	54.	55.	55.	57.	

Table 7. Electric Utilities Demand Forecast, Fuel Assessment, and Inventory Model (November 1981 - October 1982) (Cont'd)

DAYTON POWER & LIGHT

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	911.5	1030.8	1087.6	1004.5	969.6	860.6	857.3	905.5	999.6	987.2	877.0	923.2	11414.4
EST DEMAND GEN BY COAL	1039.1	1175.1	1457.4	1406.3	1066.6	946.6	943.1	996.1	1099.6	1085.9	929.6	978.6	13123.9
EST DEMAND GEN BY OIL	0.9	2.1	1.1	2.0	2.9	0.9	5.1	0.0	0.0	0.0	0.0	0.0	15.0
EST DEMAND GEN BY GAS	18.2	5.2	2.2	5.0	5.8	[illegible]	3.4	2.7	4.0	1.0	1.8	0.0	51.0
PROJ DAILY CONSUMPTION													
COAL (KTONS)	15.62	17.10	21.20	22.65	15.52	14.23	13.72	14.97	16.00	15.80	13.97	14.24	
OIL (KBBL)	0.06	0.13	0.07	0.14	0.19	0.06	0.33	0.0	0.0	0.0	0.0	0.0	
COAL DELIVERIES (KTONS)	561.0	584.0	610.0	513.0	396.0	387.0	445.0	428.0	459.0	463.0	374.0	395.0	5615.0
OIL DELIVERIES (KBBL)	18.00	23.00	41.00	38.00	27.00	13.00	10.00	11.00	19.00	16.00	14.00	43.00	273.00
END OF MONTH STOCK													
COAL (KTONS)	1320.4	1374.4	1327.1	1205.9	1120.8	1080.9	1100.6	1079.4	1042.4	1015.7	970.4	[illegible]	
OIL (KBBL)	335.2	354.1	392.9	426.9	448.1	459.4	459.1	470.1	489.1	505.1	519.1	[illegible]	
NUMBER OF DAYS SUPPLY													
COAL	68.	64.	74.	83.	79.	74.	71.	69.	70.	72.	68.	65	

OHIO EDISON SYSTEM

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	2073.7	2157.7	2369.7	2135.7	2233.9	2040.7	2031.7	2045.4	2156.9	2309.5	2078.2	2160.5	25793.6
EST DEMAND GEN BY COAL	2115.2	2330.3	2559.3	1964.8	2055.2	1877.4	1869.2	2086.3	2200.0	2355.7	2119.8	2203.7	25736.9
EST DEMAND GEN BY OIL	16.6	8.6	16.6	2.1	15.6	2.0	8.1	8.2	4.3	4.6	2.1	2.2	91.1
PROJ DAILY CONSUMPTION													
COAL (KTONS)	32.67	34.83	38.25	32.51	30.72	28.99	27.93	32.22	32.88	35.21	32.74	32.93	
OIL (KBBL)	1.17	0.59	1.13	0.16	1.07	0.14	0.56	0.58	0.29	0.32	0.15	0.15	
COAL DELIVERIES (KTONS)	1050.5	1106.8	1187.7	1034.6	1076.2	1035.7	963.2	909.6	941.6	1015.1	980.7	941.4	12243.2
OIL DELIVERIES (KBBL)	9.81	13.07	51.14	56.05	70.95	55.41	61.61	10.74	19.83	17.98	17.95	33.45	417.99
END OF MONTH STOCK													
COAL (KTONS)	1841.0	1868.2	1870.2	1994.5	2118.6	2284.4	2381.7	2324.7	2247.0	2170.7	2169.3	2089.7	
OIL (KBBL)	91.8	86.6	102.6	154.1	191.9	243.0	287.4	280.8	291.5	299.7	313.2	342.1	
NUMBER OF DAYS SUPPLY													
COAL	51.	52.	59.	67.	73.	75.	72.	69.	66.	66.	66.	63.	

TOLEDO EDISON

	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
DEMAND FORECAST (GWH)	644.0	682.9	701.7	667.3	665.5	614.8	610.1	617.7	638.4	660.0	629.6	631.4	7763.3
EST DEMAND GEN BY COAL	384.4	419.3	357.2	297.0	322.8	375.6	430.7	382.4	381.1	403.9	345.7	381.4	4481.4
EST DEMAND GEN BY OIL	1.9	2.7	4.9	0.7	0.7	1.2	0.6	1.2	1.3	0.7	0.6	0.6	17.2
EST DEMAND GEN BY GAS	1.3	0.7	2.1	1.3	0.7	0.6	0.6	1.2	1.3	0.7	410.5	205.8	626.8
EST DEMAND GEN BY NUC	317.5	297.1	55.4	525.9	449.9	171.5	492.9	365.1	195.4	320.8	648.5	650.3	4490.2
PROJ DAILY CONSUMPTION													
COAL (KTONS)	5.14	5.43	4.62	4.26	4.18	5.02	5.58	5.11	4.93	5.23	4.62	4.94	
OIL (KBBL)	0.14	0.19	0.34	0.05	0.05	0.09	0.04	0.09	0.09	0.05	0.04	0.04	
COAL DELIVERIES (KTONS)	180.0	180.0	145.0	150.0	185.0	175.0	160.0	130.0	130.0	130.0	115.0	115.0	1795.0
OIL DELIVERIES (KBBL)	7.86	19.52	4.76	9.76	4.05	3.09	13.33	3.81	4.17	4.76	8.09	4.17	87.38
END OF MONTH STOCK													
COAL (KTONS)	454.2	465.9	467.6	498.4	553.9	578.1	565.3	541.9	518.9	486.8	463.1	425.1	
OIL (KBBL)	48.5	62.2	56.5	64.9	67.5	68.0	80.0	81.2	82.6	86.0	92.7	95.6	
NUMBER OF DAYS SUPPLY													
COAL	96.	105.	101.	101.	107.	111.	113.	110.	105.	101.	94.	86.	

NATURAL GAS

Service shares of the gas distribution companies operating in Ohio are presented in Table 8 for the annual period September 1980 to August 1981. During this period of time, the four large distribution companies - Cincinnati Gas and Electric, Columbia Gas of Ohio, Dayton Power and Light, and East Ohio Gas - jointly distributed 93.97 percent of the reported natural gas requirements of the state. The four intermediate companies - National Gas and Oil, Ohio Gas, River Gas, and West Ohio Gas - distributed an additional 4.37 percent. The remaining 1.66 percent of the reported natural gas requirements were distributed by 22 small utilities and two municipal utilities. The figures presented in Table 8 do not include self-help natural gas.

Supply

The major sources of supplies of natural gas to the state of Ohio are presented in Table 9, and the quantities supplied are shown graphically in Figure 10. Between September 1980 and August 1981, the eight major gas distribution companies of Ohio, which together account for 98.33 percent of the reported natural gas distribution in the state, procured 925,961 MMCF of natural gas to meet Ohio's requirements. This represents a 1.8 percent decrease in the supplies of natural gas to Ohio compared to the same period last year. This decline reflects the reaction of Ohio's gas distribution companies to the declining natural gas requirements of residential, commercial, and especially industrial end-users in Ohio. The various causes are effective conservation measures, the recession of 1980-1981, and the latest round of price increases for fuel oil and natural gas in 1980.

Table 8. Total Natural Gas Requirements of All Commercial Utilities in Ohio From September 1980 through August 1981 (MMCF)

	(1) Sales to All End Users	(2) Storage (In)	Total Requirement (1+2)	Percent of Total Ohio Requirement
Cincinnati Gas and Electric Co.	1,586	0	91,586	9.73
Columbia Gas of Ohio	337,803	45	337,848	35.88
Dayton Power and Light Co.	59,299	196	59,495	6.32
East Ohio Gas Co.	331,597	64,326	395,923	42.04
National Gas and Oil Co.	14,411	1,082	15,493	1.65
Ohio Gas Co.	7,065	305	7,370	0.78
River Gas Co.	4,595	0	4,595	0.49
West Ohio Gas Co.	13,651	0	13,651	1.45
Total Eight Major Utilities	860,007	65,954	925,961	98.33
Total Small Utilities	8,607	0	8,607	0.91
Municipal Utilities	7,098	0	7,098	0.75
Total All Utilities	875,712	65,954	941,666	100.00

Source: ODOE Form SG-2 and SG-4.

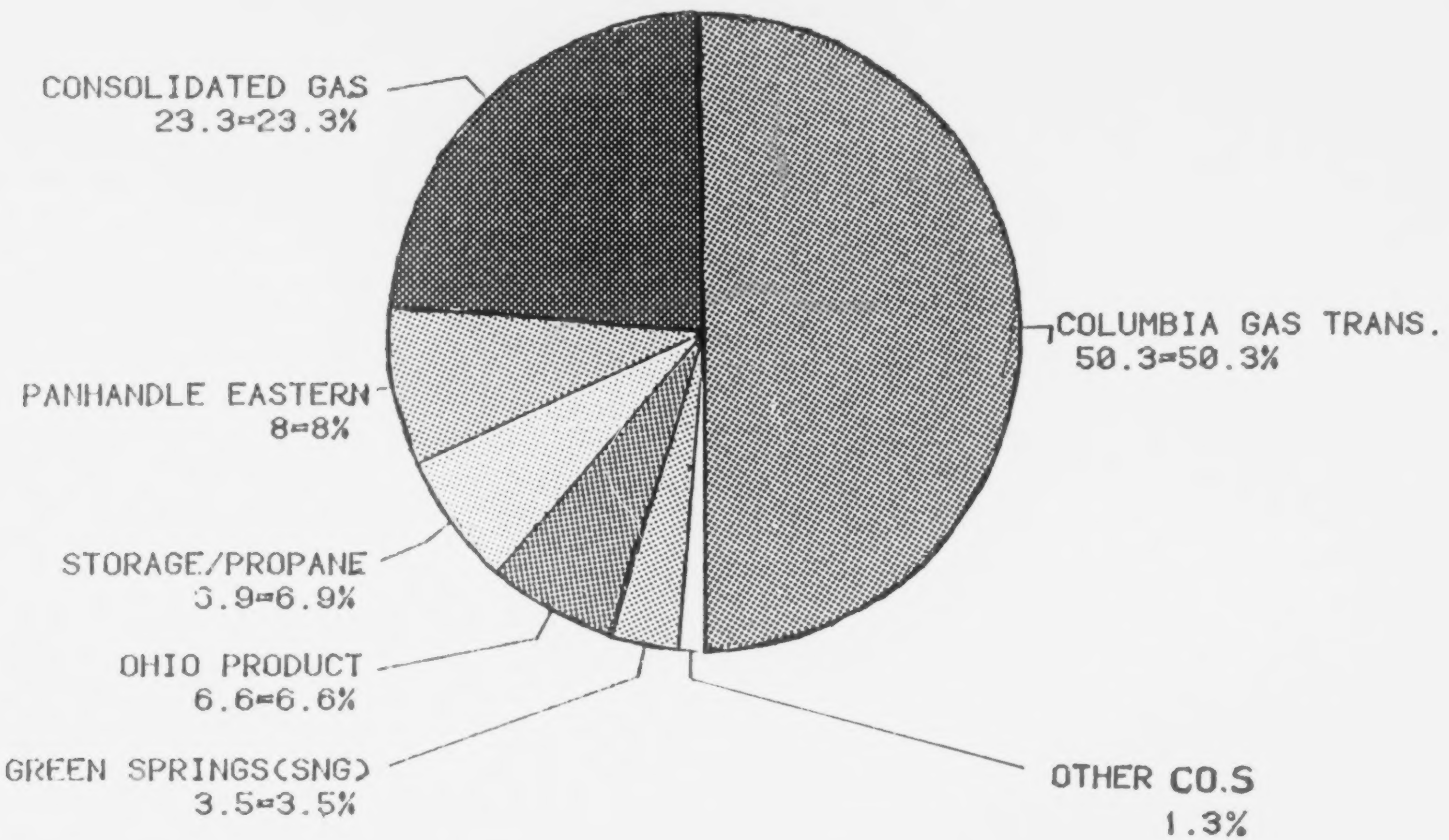
Table 9. Sources of Natural Gas Supplies to the Eight Major Gas Utilities Between September 1980 and August 1981 (MMCF)

Source	Supply	Percent Of Total	Rank
Columbia Gas Transmission Corp.	465,437	50.3	1
Consolidated Gas Supply Corp.	215,952	23.34	2
Lawrenceburg Gas Transmission Corp.	2,399	0.26	8
Michigan/Wisconsin Pipe Line Co.	674	0.07	10
Panhandle Eastern Pipe Line Co.	73,885	7.98	3
Tennessee Gas Pipeline Co.	1,747	0.19	9
Texas Eastern Transmission Corp.	7,100	0.77	7
Texas Gas Transmission Corp.	262	0.03	11
Green Springs (SNG)	32,437	3.50	6
Storage/Propane*	64,024	6.92	4
Other	-38	0.00	
Total SNG and Out-of-State	863,879	93.36	
Ohio Product	61,510	6.64	5
Total	922,906	100.00	

*Gas in storage represents a source during the period under consideration.

Source: ODOE Form SG-2.

FIG. 10. SOURCE OF NATURAL GAS SUPPLY TO
THE EIGHT MAJOR OHIO GAS UTILITIIES (SEPT. 1980-AUG. 1981)



SOURCE: OHIO DEPARTMENT OF ENERGY

Of the 922,906 MMCF of total procurement, 93.36 percent is interstate gas purchases and SNG. The remaining 6.64 percent is purchases of Ohio gas. The 61,510 MMCF of Ohio production of natural gas purchased by the eight major gas utilities between September 1980 and August 1981 represents a 13 percent decrease below their purchases of Ohio product during the preceding annual period. This amount corresponds approximately to 44 percent of the state's total production in the calendar year 1980. The remainder of the natural gas produced in Ohio is either transported directly to end users in the self-help program, or is distributed by some of the 22 smaller utilities and the municipal gas utilities.

Domestic interstate gas is the major source of supply for Ohio. Columbia Gas Transmission Corporation and Consolidated Gas Supply Corporation have provided 73.64 percent of the natural gas supplied to the eight major Ohio gas distribution companies. No LNG imports were included in these supplies; and no LNG imports are anticipated by Columbia as a source of supply for the 1981-82 heating season.

Table 10 exhibits a monthly comparison of actual and projected supplies, by source, for the eight major gas utilities.

Historical Behavior of Monthly Sectoral Requirements

The regularities in the monthly time series behavior of residential, commercial, industrial, and total natural gas requirements in Ohio, from January 1970 through August 1981, are displayed in Figures 11, 12, 13, and 14. The seasonal variation in residential and commercial requirements can easily be discerned from these illustrations. Natural gas usage in all sectors peaks during the heating season, and falls off during the cooling season. The contrast between the natural gas

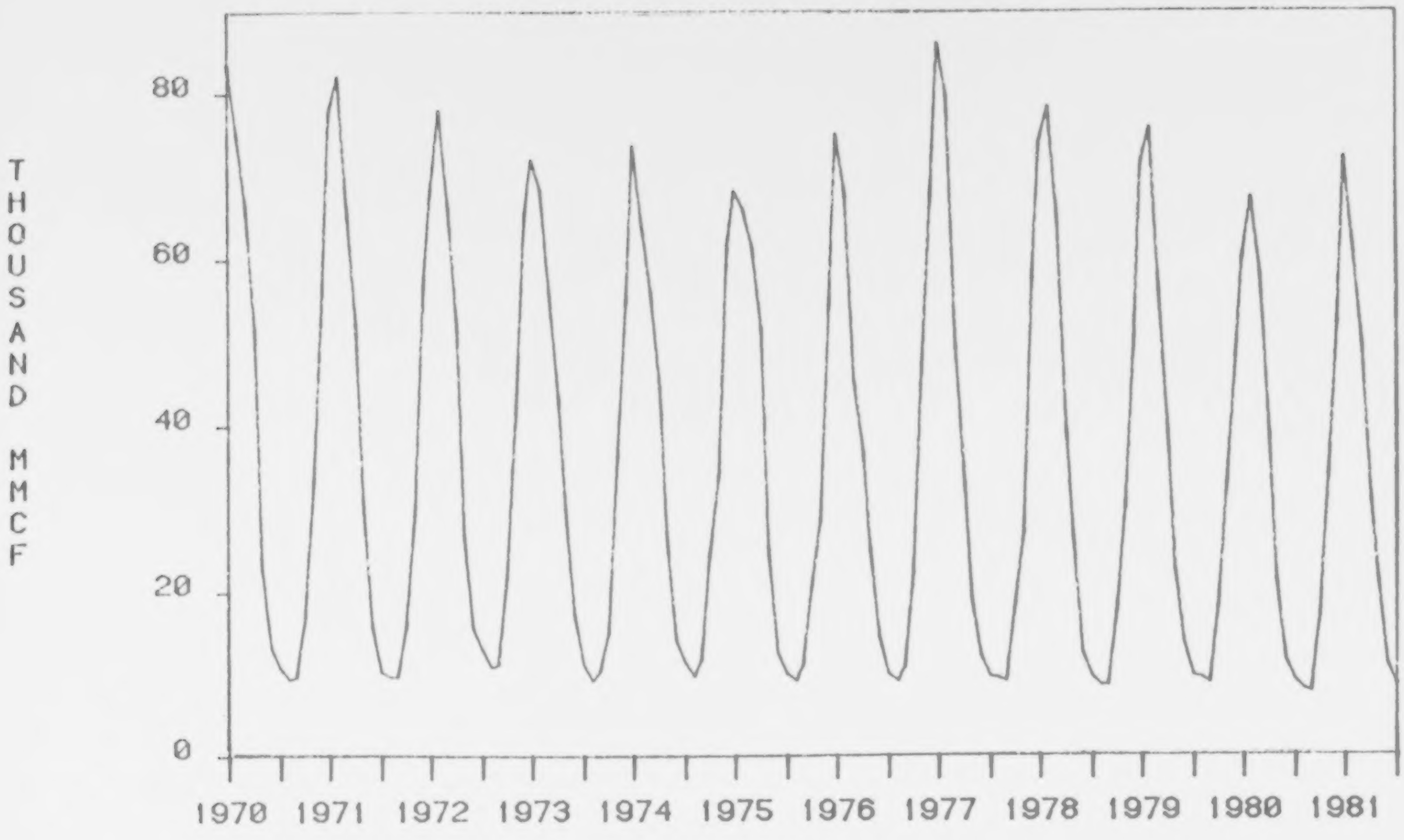
Table 10. Comparison Between One Year of Actual and Forecast Supply for Eight Major Ohio Gas Utilities by Source (MMCF)

MO/YR	COLUMBIA GAS	CONSOLID ATED GAS	LAWREN CEBURG	MICH WISC.	PANHANDLE EAST	TENN. GAS	TEXAS EASTERN	TEXAS GAS	EMERG GAS	OHIO PRODUCT	SNG	STORAGE/ PROPANE	OTHER	TOTAL SUPPLIES
8/81	19950	12679	224	7	6318	125	620	9	0	5131	1661	165	-20	46869
8/80	16966	9763	256	6	5572	153	469	7	0	5495	1490	153	15	40645
	17.6%	29.9%	-12.5%	16.7%	7.6%	-18.3%	32.2%	28.6%	0.0%	-6.6%	11.5%	7.8%	-233.3%	15.3%
9/81	20546	14722	255	34	6402	146	600	13	0	5132	1789	165	-41	49763
9/80	17828	11432	247	15	5692	140	589	7	0	5694	1603	160	46	43453
	15.2%	28.8%	3.2%	126.7%	12.5%	4.3%	1.9%	85.7%	0.0%	-9.9%	11.6%	3.1%	-189.1%	14.5%
10/81	31933	20149	264	100	6899	140	600	19	0	5142	2455	170	-91	67781
10/80	34424	22302	245	27	6375	157	670	18	0	5792	2202	257	309	72773
	-7.2%	-9.7%	7.8%	270.4%	8.2%	-10.8%	-10.4%	5.6%	0.0%	-11.2%	11.5%	-33.9%	-129.4%	-6.9%
11/81	45791	11837	189	56	7280	0	600	28	0	5342	3290	11412	-80	85745
11/80	47634	13193	204	72	6237	154	535	30	0	5233	3189	12230	-166	88547
	-3.9%	-10.3%	-7.4%	-22.2%	16.7%	-100.0%	12.1%	-6.7%	0.0%	2.1%	3.2%	-6.7%	51.8%	-3.2%
12/81	63986	16996	147	58	7528	124	620	44	0	5343	4327	17240	-35	116376
12/80	62925	23542	158	85	6709	153	617	40	0	5276	4140	13714	109	117473
	1.7%	-27.8%	-7.0%	-31.8%	12.2%	-21.5%	0.5%	10.0%	0.0%	1.3%	4.5%	25.7%	-132.1%	-0.9%
1/82	76575	22851	106	77	7532	140	605	48	0	5267	4630	16844	-25	134650
1/81	76835	28123	102	150	6748	135	656	50	0	5183	4388	16803	226	139399
	-0.3%	-18.7%	3.9%	-48.7%	11.6%	3.7%	-7.8%	-4.0%	0.0%	1.6%	5.5%	0.2%	-111.1%	-3.4%
2/82	62773	24765	120	84	6801	127	555	39	0	5264	4376	10675	55	115634
2/81	60298	22211	132	93	5924	124	574	38	0	4512	4045	10140	-61	103030
	4.1%	11.5%	-9.1%	-9.7%	14.8%	2.4%	-3.3%	2.6%	0.0%	16.7%	8.2%	5.3%	190.2%	7.0%
3/82	53825	19582	183	93	7525	150	610	35	0	5286	3970	9645	30	100934
3/81	52370	20720	175	79	6368	150	622	32	0	4991	3752	9136	-250	98145
	2.8%	-5.5%	4.6%	17.7%	18.2%	0.0%	-1.9%	9.4%	0.0%	5.9%	5.8%	5.6%	112.0%	2.8%
4/82	38966	24486	242	75	6743	150	600	22	0	5161	3187	585	10	80205
4/81	30385	22264	227	48	5841	136	570	14	0	5254	2711	674	-178	67946
	28.2%	10.0%	6.6%	56.3%	15.4%	10.3%	5.3%	57.1%	0.0%	-1.8%	17.6%	-13.2%	105.6%	18.0%
5/82	27355	19653	264	55	6675	150	620	14	0	5131	2273	230	-10	62410
5/81	27606	17894	241	36	6092	137	614	13	0	4866	2003	425	64	59991
	-0.9%	9.8%	9.5%	52.8%	9.6%	9.5%	1.0%	7.7%	0.0%	5.4%	13.5%	-45.9%	-115.6%	4.0%
6/82	20315	14701	255	42	6184	150	600	10	0	4729	1789	165	-60	48883
6/81	19002	12196	240	24	5834	151	566	7	0	5046	1576	149	-119	44672
	6.9%	20.5%	6.3%	75.0%	6.0%	-0.7%	6.0%	42.9%	0.0%	-6.3%	13.5%	10.7%	49.6%	9.4%
7/82	5530	12355	263	36	6239	150	620	9	0	4583	472	170	-35	30392
7/81	17340	10512	256	21	6041	155	624	6	0	5397	1404	168	-97	41827
	-68.1%	17.5%	2.7%	71.4%	3.3%	-3.2%	-0.6%	50.0%	0.0%	-15.1%	-66.4%	1.2%	63.9%	-27.3%
SUMMER TOTAL														
	164576	118745	1767	349	45460	1011	4260	96	0	35009	13626	1650	-247	386303
	163549	106363	1712	177	41747	1029	4102	72	0	37546	12989	1986	40	371312
	0.6%	11.6%	3.2%	97.2%	8.9%	-1.7%	3.9%	33.3%	0.0%	-6.8%	4.9%	-16.9%	-717.5%	4.0%
WINTER TOTAL														
	302968	96031	745	368	36666	541	2990	194	0	26502	20593	65816	-55	553339
	300062	107769	721	479	31983	721	3004	190	0	25195	19514	62023	-142	551594
	1.0%	-10.9%	3.4%	-23.2%	14.6%	-25.0%	-0.5%	2.1%	0.0%	5.2%	5.5%	6.1%	61.3%	0.3%
YEAR TOTAL														
	467524	214776	2512	717	82126	1552	7250	290	0	61511	34219	67466	-302	939642
	463611	214152	2483	656	73735	1750	7106	262	0	62741	32503	64009	-102	922906
	0.8%	0.3%	1.2%	9.3%	11.4%	-11.3%	2.0%	10.7%	0.0%	-2.0%	5.3%	5.4%	-196.1%	1.8%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH.

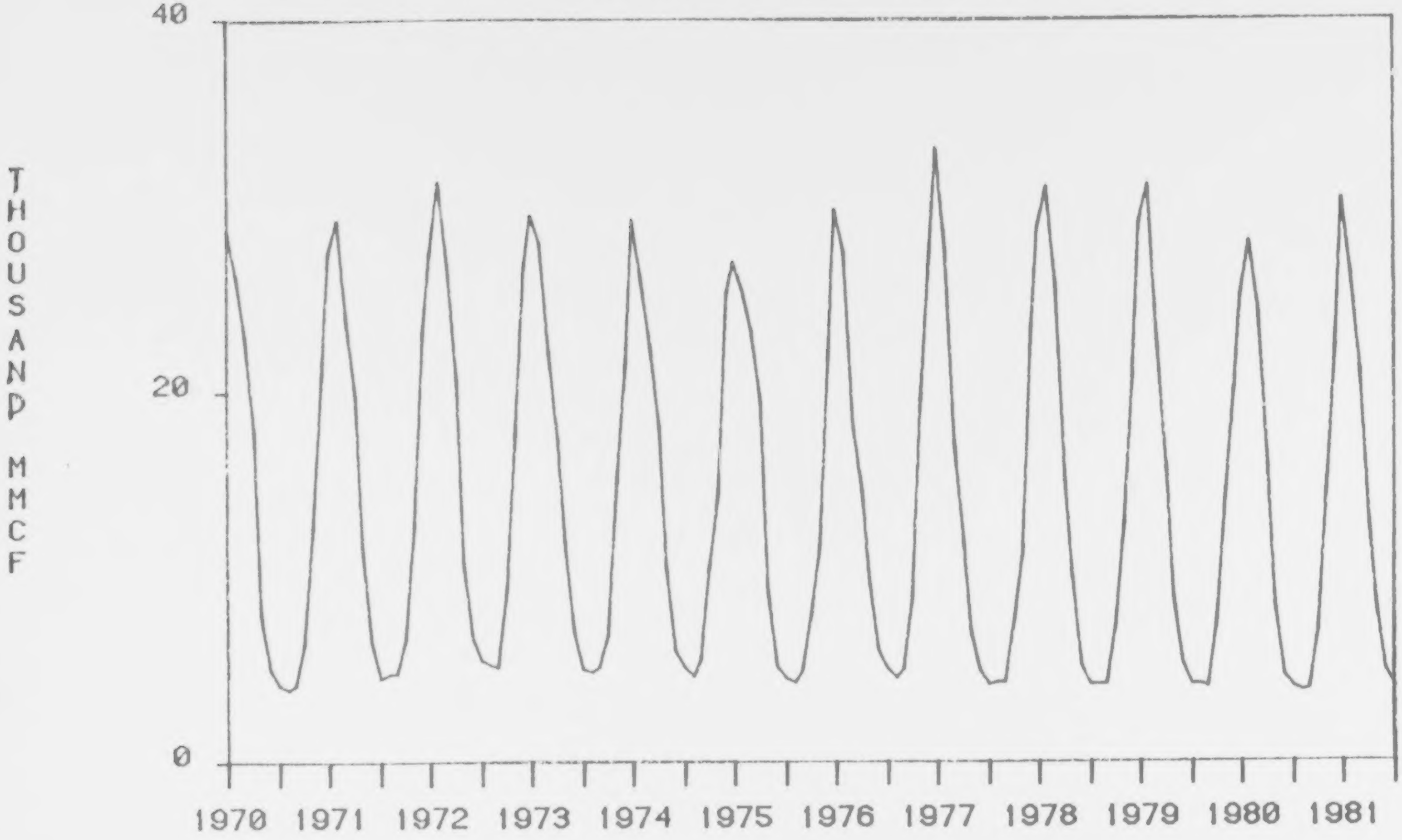
(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON ZERO VALUE AND THUS A DIVISION BY ZERO.

FIG. 11. MONTHLY OHIO RESIDENTIAL NATURAL GAS CONSUMPTION
JANUARY 1970 - JULY 1981



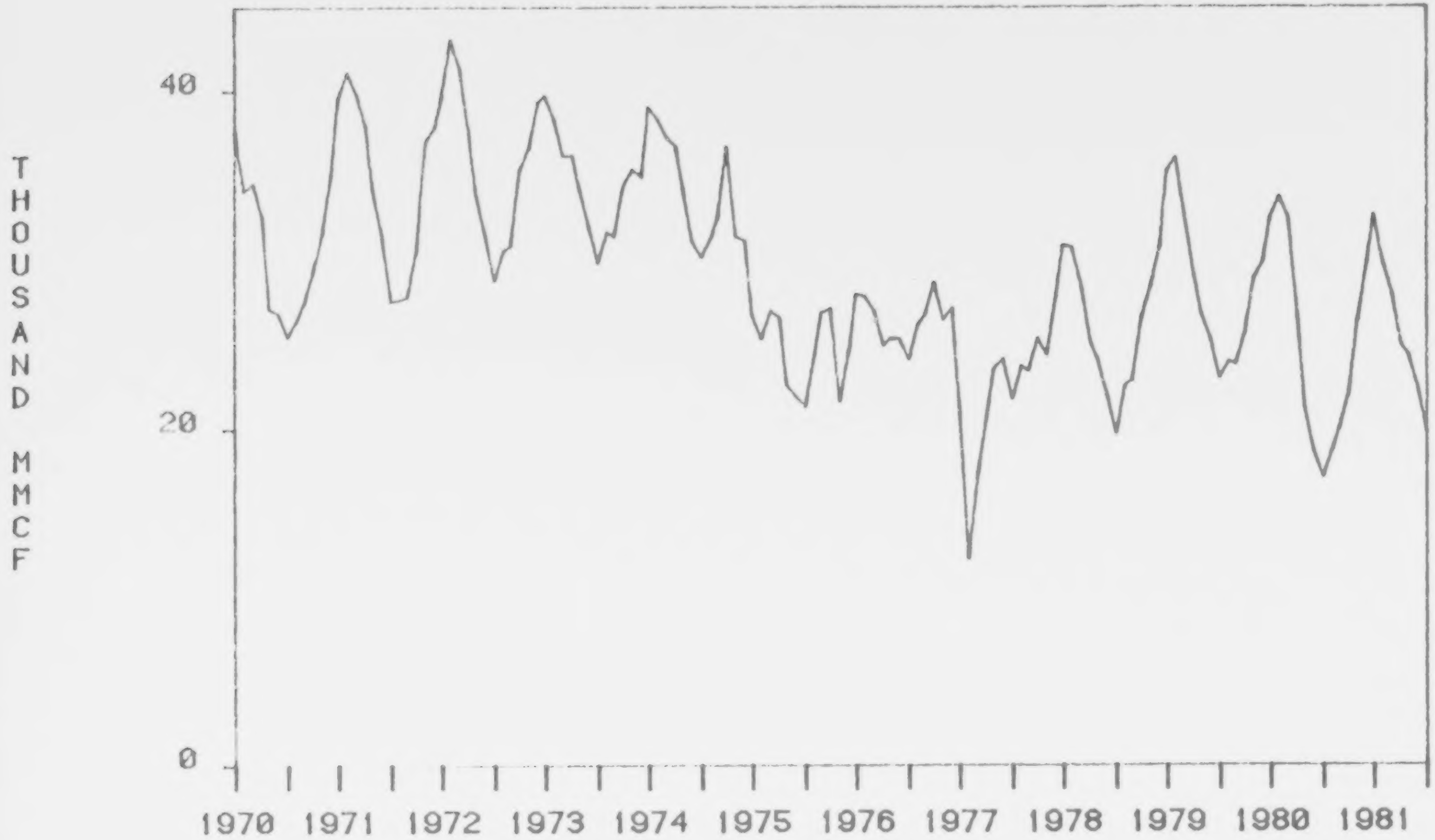
SOURCE: THE OHIO DEPARTMENT OF ENERGY

FIG. 12. MONTHLY OHIO COMMERCIAL NATURAL GAS CONSUMPTION
JANUARY 1970 - JULY 1981



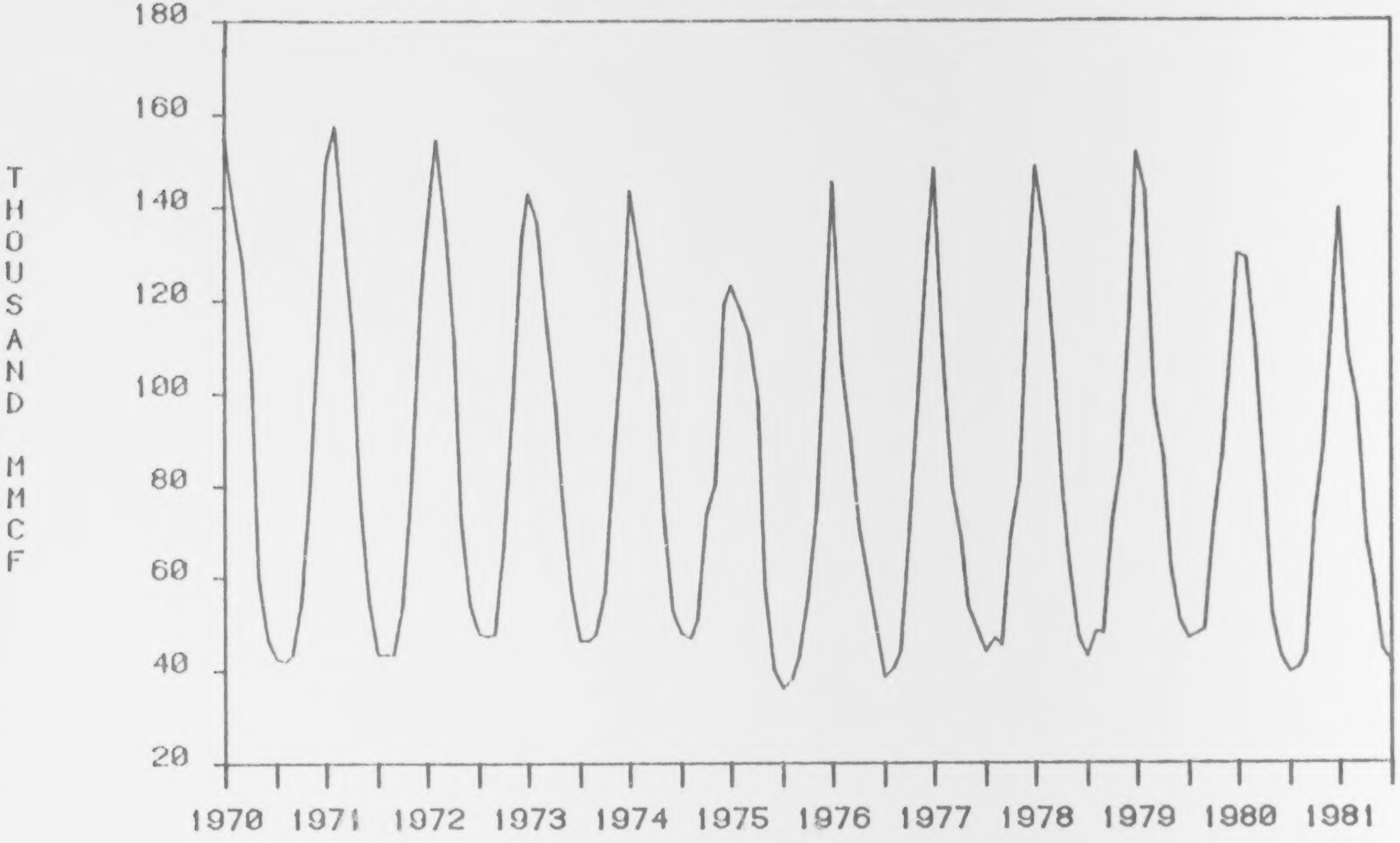
SOURCE: THE OHIO DEPARTMENT OF ENERGY

FIG. 13. MONTHLY OHIO INDUSTRIAL NATURAL GAS CONSUMPTION
JANUARY 1970 - JULY 1981



SOURCE: THE OHIO DEPARTMENT OF ENERGY

FIG. 14. MONTHLY OHIO TOTAL NATURAL GAS CONSUMPTION
JANUARY 1970 - JULY 1981



SOURCE: THE OHIO DEPARTMENT OF ENERGY

consumption levels during the heating as opposed to the non-heating seasons has increased over the past two years. The effects of curtailments enforced on the industrial sector during the 1976-77 heating season is dramatically shown in Figure 13.

Since natural gas is the primary source of space heating for the residential and commercial sectors, over 60 percent of the natural gas consumed in Ohio is used during the heating season. Table 11 shows the actual aggregate monthly requirements for the eight major utilities, between June 1980 and May 1981, along with the utilities' consolidated projections for the forth- coming twelve months. Figure 15 is a graphic representation of the utilities' consolidated sectoral projections for the forthcoming twelve months.

Forecasts of sectoral requirements for Ohio are presented in Appendix B, Tables B-5 through B-8, for the annual period November 1981-October 1982.

Historical Behavior of Annual Sectoral Requirements

In Figures 16-21 we have presented the annual sectoral natural gas consumption patterns observed in Ohio between 1960 and 1980. In Figure 22 we have indicated the relative shares of residential, commercial, industrial, and the combined electric utilities and transportation sectors in the Ohio total.

With the breakdown of the Bretton Woods International Monetary System in 1971, which eventually led to a one hundred percent depreciation in the U.S. dollar, and the OPEC price hikes of 1973, which permanently altered the structure of costs and expenditures in all sectors of the economy, there grew a gap between the opportunity cost of natural gas as determined in international, or interstate trade, and the federally

Table 11. Comparison Between One Year of Actual and Forecast Demand for Eight Major Ohio Gas Utilities by Sector (MMCF)

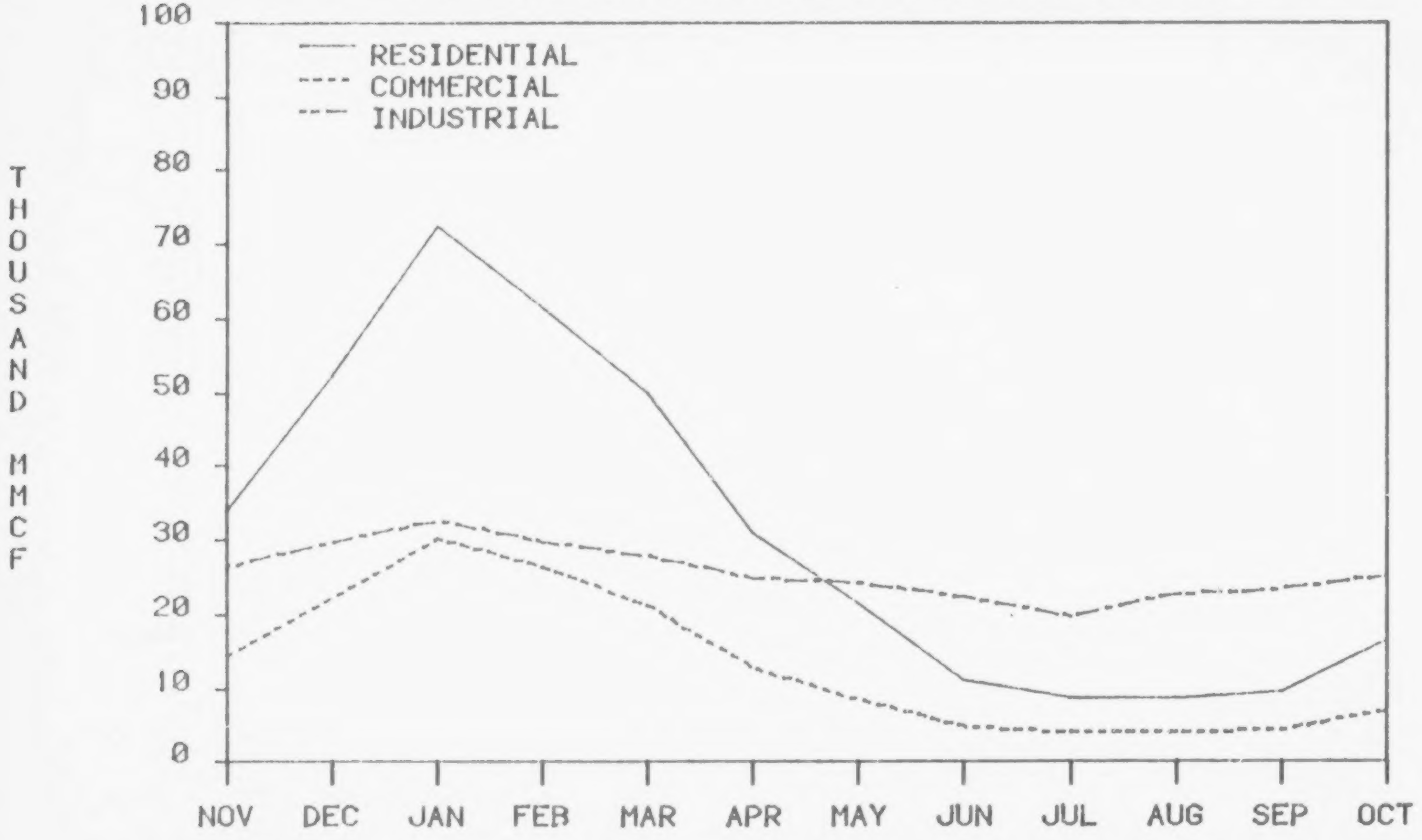
MONTH-YEAR	DEGREE DAYS	RESIDENTIAL REQUIREMENT	COMMERCIAL REQUIREMENT	INDUSTRIAL REQUIREMENT	OTHER REQUIREMENT	STORAGE (IN)	TOTAL REQUIREMENT	DEFICIENCY
8/81	11	8765	4098	22824	1730	6992	46389	480
8/80	11	8181	3892	18712	1099	8761	40645	0
	0.0%	6.9%	5.3%	22.0%	57.4%	2.6%	14.1%	999.9%
9/81	87	9664	6429	23457	2822	8690	49062	-701
9/80	87	7932	3959	26022	3028	8513	43453	0
	0.0%	21.8%	11.9%	17.2%	-6.8%	2.1%	12.9%	999.9%
10/81	336	16603	7101	25273	11017	7023	67017	764
10/80	336	16794	7185	22027	17181	9591	72778	0
	0.0%	1.1%	-1.2%	14.7%	-35.9%	-26.8%	-7.9%	999.9%
11/81	690	31863	13598	27159	11860	0	84485	-1260
11/80	686	33960	14548	26501	13483	55	88547	0
	0.6%	-6.2%	-6.5%	2.5%	-12.0%	-100.0%	-4.6%	999.9%
12/81	1052	52300	22208	29171	11528	0	115207	-1169
12/80	1028	52156	22197	29781	13322	17	117473	0
	2.3%	0.3%	0.0%	-2.0%	-13.5%	-100.0%	-1.9%	999.9%
1/82	1161	65575	27643	31661	7667	1326	133572	1078
1/81	1126	72449	30341	32697	3907	5	139399	0
	1.5%	-9.6%	-8.9%	3.2%	91.1%	26420.0%	-4.2%	999.9%
2/82	980	60991	25790	31716	-5308	1326	114515	-1119
2/81	977	61561	26455	29857	-6486	-3357	108030	0
	0.3%	0.9%	-2.5%	6.2%	18.2%	139.5%	6.0%	999.9%
3/82	823	52426	22241	29787	-4979	0	99473	1461
3/81	814	49886	21190	27930	-796	135	98145	0
	1.1%	5.1%	5.0%	6.6%	-399.9%	-100.0%	1.4%	999.9%
4/82	735	36780	15670	27041	-8714	8308	79085	-1120
4/81	455	30965	12834	24867	-6393	5673	67946	0
	61.5%	18.8%	22.1%	8.7%	-36.3%	46.4%	16.4%	999.9%
5/82	202	21187	9043	25118	-4230	10437	61555	-855
5/81	196	21548	8532	24330	-3792	9573	59991	0
	3.1%	1.7%	6.0%	3.2%	-6.0%	9.0%	2.6%	999.9%
6/82	30	11888	5214	23724	-2483	10113	48456	427
6/81	29	11236	4935	22415	-3163	9249	44672	0
	3.4%	5.8%	5.7%	5.8%	21.5%	9.3%	8.5%	999.9%
7/82	5	5439	2550	11564	624	9821	29998	-394
7/81	5	8598	4027	19841	235	9126	41827	0
	0.0%	36.7%	36.7%	-41.7%	165.5%	7.6%	-28.3%	999.9%
SUMMER TOTAL								
	1404	110306	48105	159001	766	63384	381562	4741
	1117	105254	45363	152214	7995	60486	371312	0
	25.7%	4.8%	6.0%	4.5%	-90.4%	4.8%	2.8%	999.9%
WINTER TOTAL								
	4686	263058	111480	149494	20568	2652	547252	-6067
	4629	270012	114731	146766	23230	3145	551594	0
	1.2%	-2.6%	-2.8%	1.9%	-11.5%	184.3%	-0.8%	999.9%
YEAR TOTAL								
	6090	373364	159585	308495	21334	66036	928814	-10828
	5744	375266	160095	298980	31225	57341	922906	0
	6.0%	0.5%	0.3%	3.2%	-31.7%	15.2%	0.6%	999.9%

NOTE: (1) WINTER TOTAL IS A SUM OF THE VALUES IN NOVEMBER, DECEMBER, JANUARY, FEBRUARY, AND MARCH

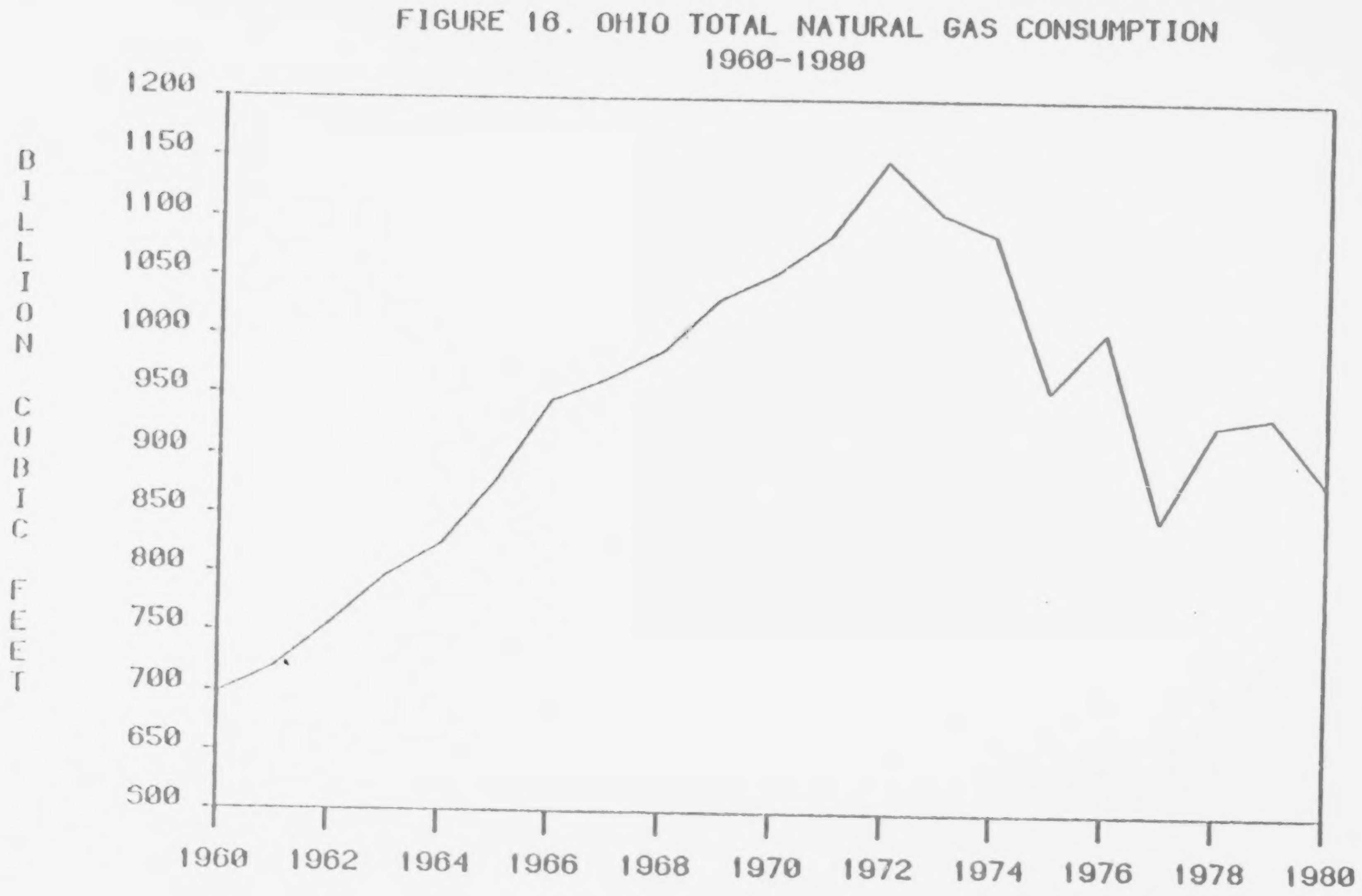
(2) 999.9% REPRESENTS AN INFINITE PERCENTAGE CHANGE RESULTING FROM AN INCREASE FROM A ZERO VALUE TO SOME NON ZERO VALUE AND THUS A DIVISION BY ZERO.

(3) A POSITIVE DEFICIENCY INDICATES SHORTAGE, A NEGATIVE DEFICIENCY INDICATES SURPLUS.

FIG. 15. PROJECTED GAS REQUIREMENTS FOR OHIO BY SECTOR FOR EIGHT MAJOR COMPANIES (NOV.1980-OCT.1981)

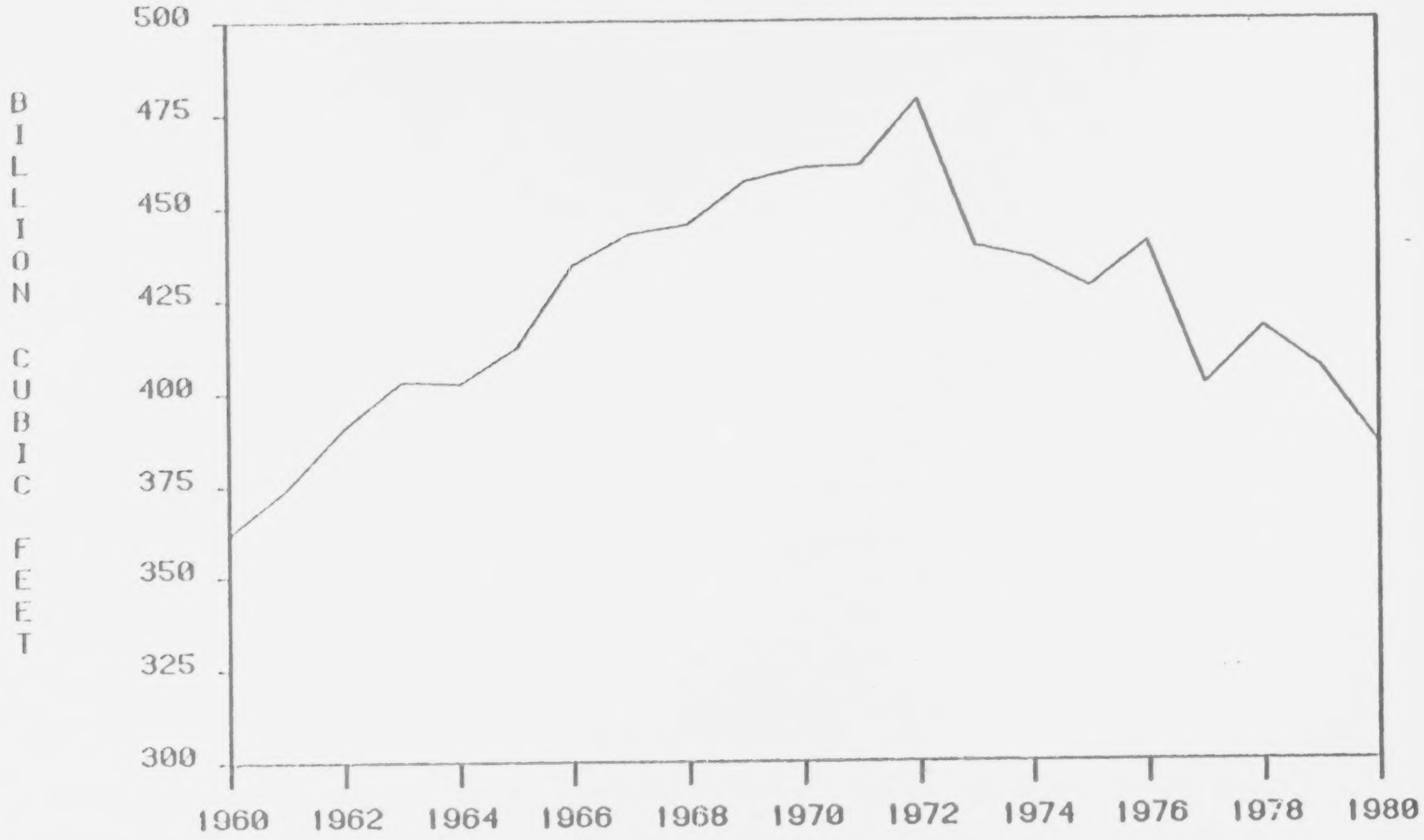


SOURCE: MONTHLY PROJECTIONS OF EIGHT MAJOR GAS UTILITIES AND THE OHIO DEPARTMENT OF ENERGY



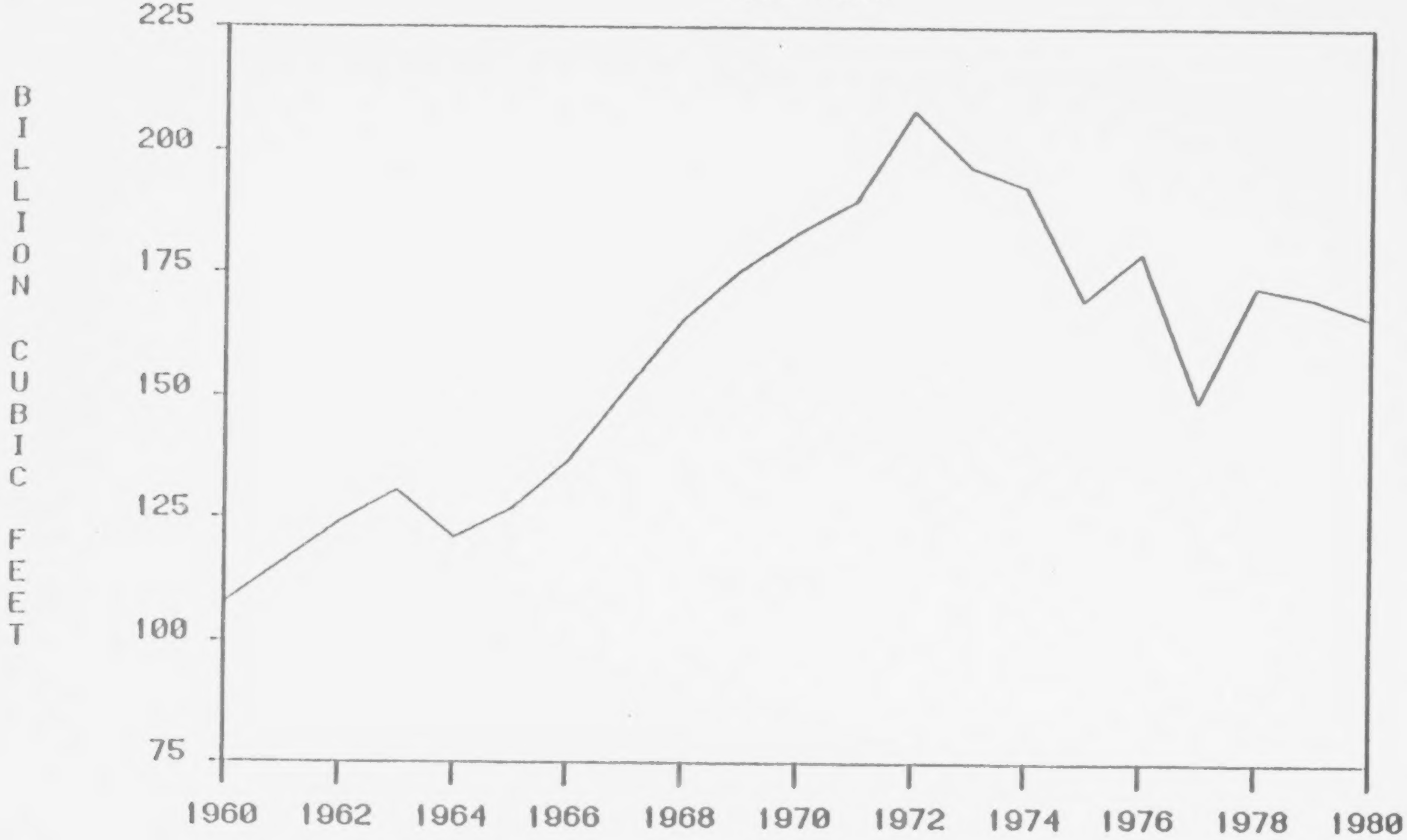
SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 17. OHIO RESIDENTIAL NATURAL GAS CONSUMPTION
1960-1980



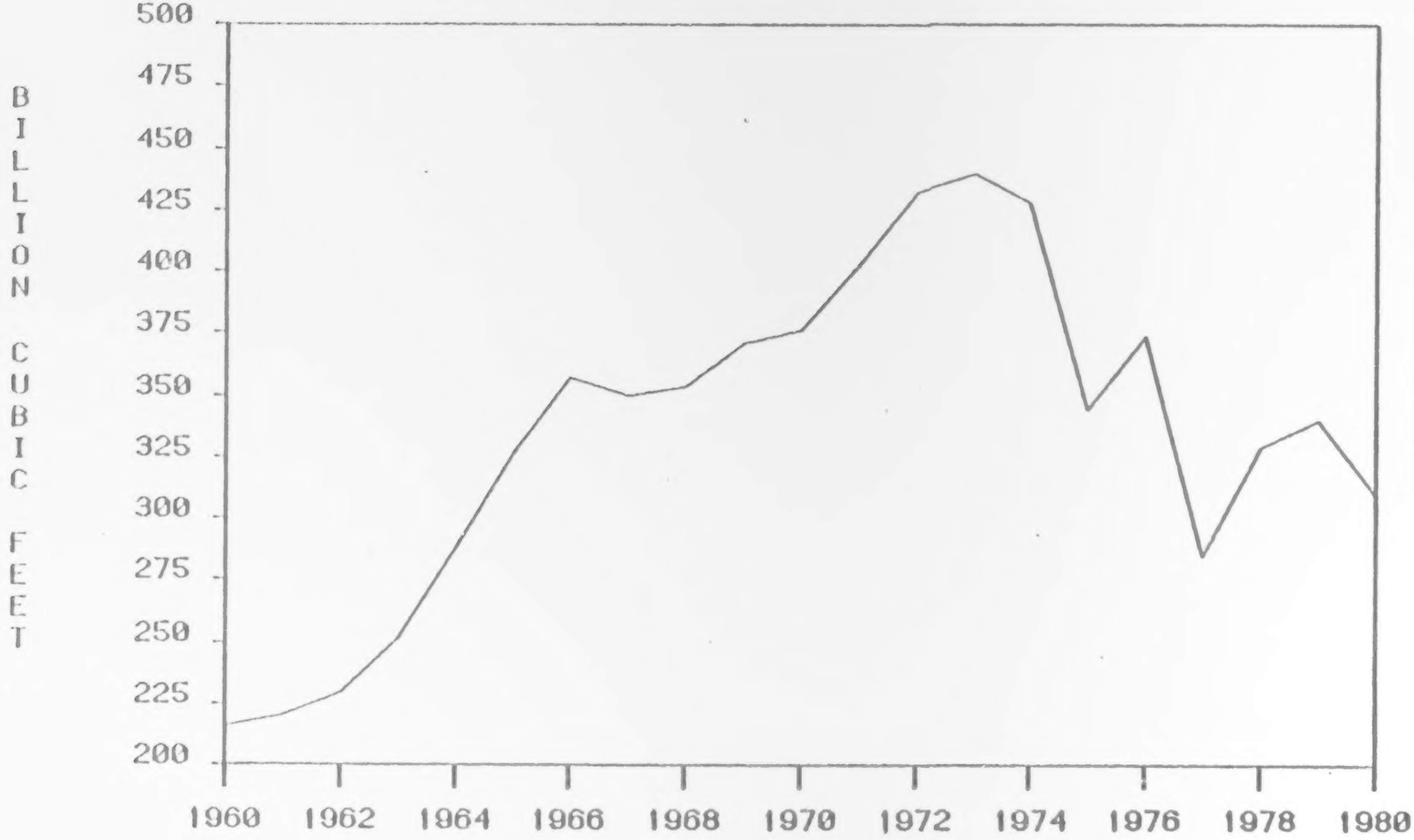
SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 18. OHIO COMMERCIAL NATURAL GAS CONSUMPTION
1960-1980



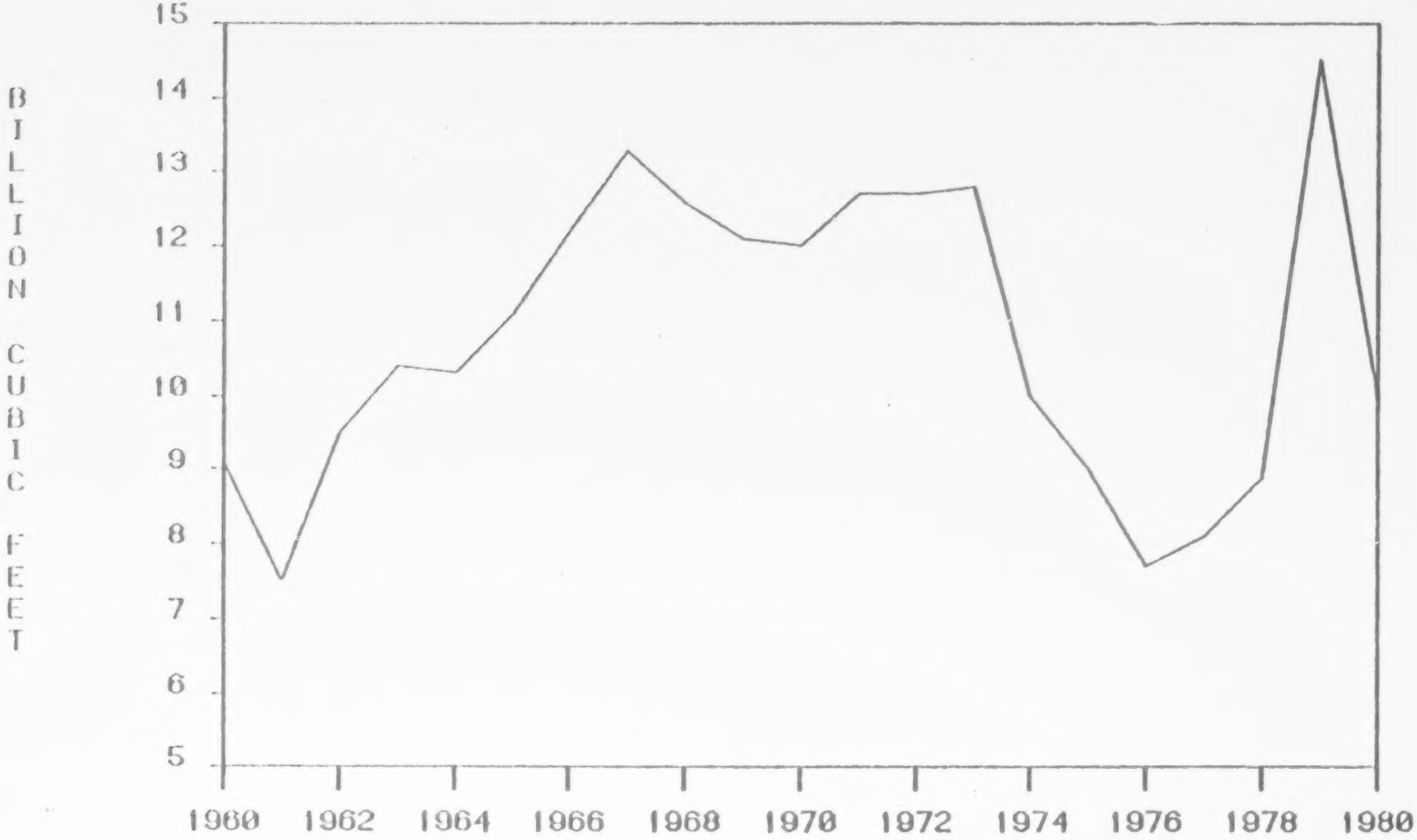
SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 19. OHIO INDUSTRIAL NATURAL GAS CONSUMPTION
1960-1980



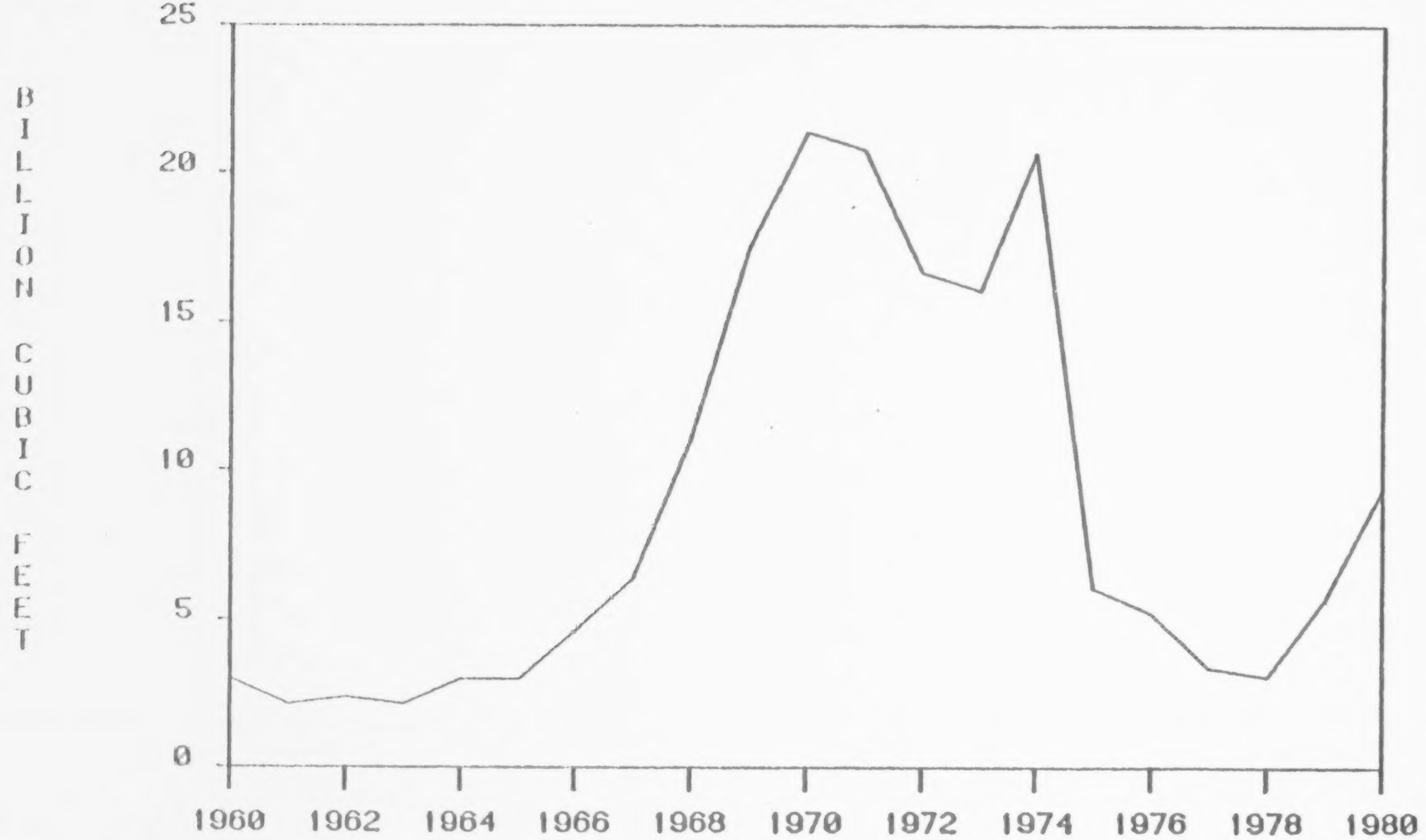
SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 20. OHIO TRANSPORTATION NATURAL GAS CONSUMPTION 1960-1980



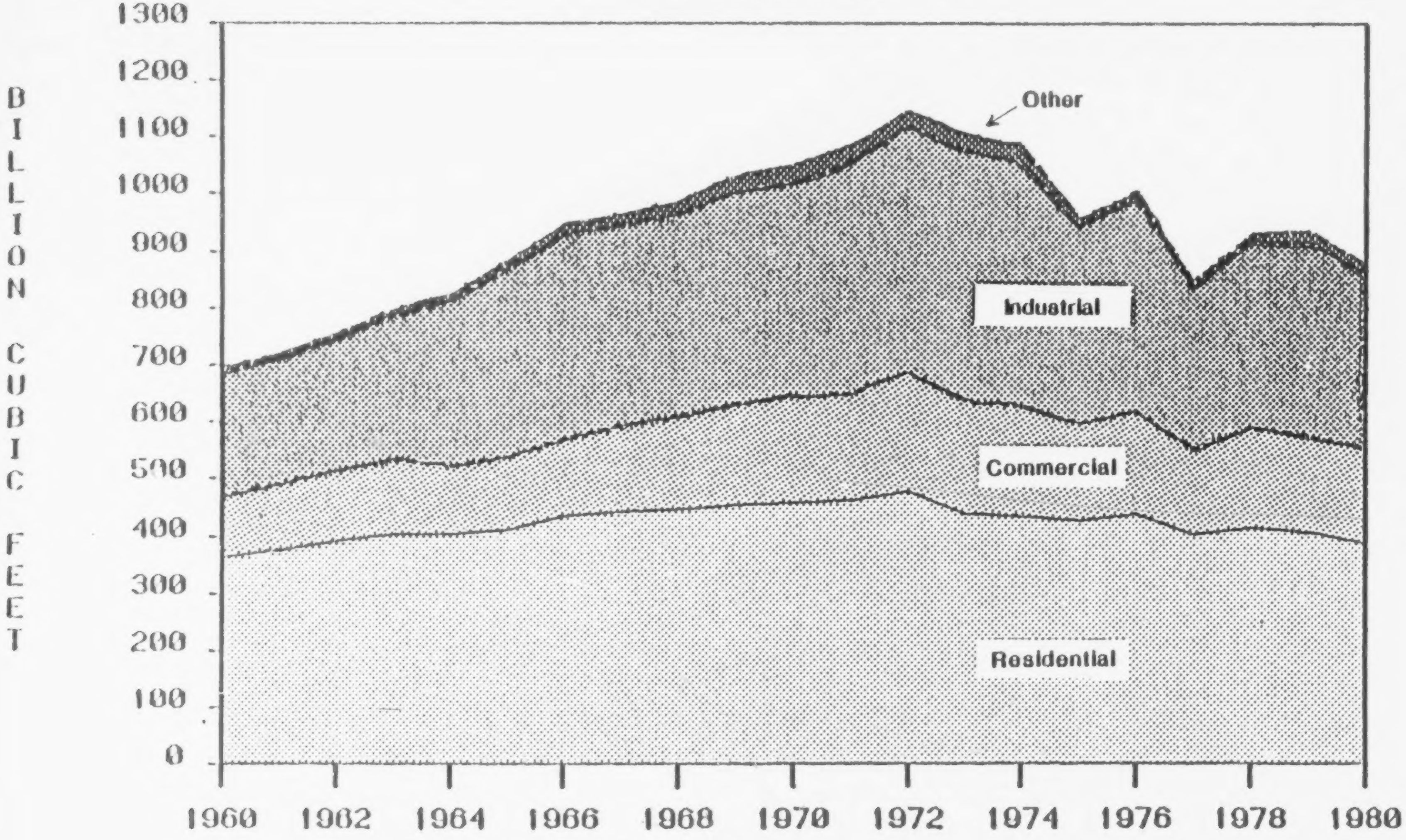
SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 21. OHIO ELECTRIC UTILITY NATURAL GAS CONSUMPTION 1960-1980



SOURCE: OHIO DEPARTMENT OF ENERGY

FIGURE 22. OHIO NATURAL GAS CONSUMPTION BY SECTOR 1960-1980



NOTE: "OTHER" INCLUDES TRANSPORTATION AND ELECTRIC UTILITY CONSUMPTION.

SOURCE: OHIO DEPARTMENT OF ENERGY

regulated wellhead price for interstate commerce. As a result of this discrepancy, supplies of natural gas for interstate commerce continuously declined between 1973 and 1977.

Consequently, states such as Ohio, which depend on interstate natural gas as their major source of supply, suffered from natural gas shortages during this period in the sense that, at the prevailing price of natural gas, supplies were not sufficient to satisfy all prospective customers. In anticipation of this situation Ohio natural gas utilities applied for and were granted a ban on new customer hookups in 1972. This ban stayed in effect until the passage of the Natural Gas Policy Act of 1978.

Historical Behavior of Industrial Requirements

As a result of the reduction in aforementioned interstate supplies, base allocations of lower priority industrial and commercial customers were curtailed between 1973-1977, which led to extensive conservation in the industrial sector, and to fuel switching.

It was hoped that with the passage of the Natural Gas Policy Act of 1978, which decontrolled some natural gas prices immediately, and which foresees the decontrol of all natural gas prices by 1985, availability of natural gas supplies to Ohio customers in general, and to Ohio industrial customers, in particular, would be enhanced. Since the ban on new customer hookups has been lifted from all Ohio utilities, there is no question that the "unavailability" of supplies is not the reason why industrial requirements have declined in 1980. Rather, in contradistinction with the sixties, the severe recessions of 1974-75, and 1980-81 have, also, taken their toll in reducing the level of economic activity in general, and the industrial consumption of natural gas, in particular.

It is anticipated that as the economy recovers from the current recession, natural gas will still be a preferred fuel for industrial consumption, as long as its price per Btu remains competitive with the per Btu price of heating oil.

Historical Behaviors of Residential and Commercial Requirements

Although no new customer hookups were allowed between 1972 and 1978-79, the number of residential customers in Ohio has remained the same, for all practical purposes, during this period. However, the weather sensitivity of residential consumption during the same period of time, measured in terms of the change in the monthly volume of residential requirements in MMCF per degree day change per month, has been declining in the service areas of the four major Ohio natural gas utilities, as presented in Table 12. This fact is a clear reflection of the effectiveness of residential conservation measures implemented in Ohio, by ODOE and others.

There is no doubt that the major incentive for conservation in all sectors of the economy is the fact that the increases in energy costs between 1972 and 1980, eight-fold in the cost of imported oil and four-fold in Ohio natural gas prices, as indicated in Tables 19 and 20, have been far ahead of any increases in real per capita income. So much so that maintenance of discretionary expenditures on non-energy items has required severe reductions in the levels of energy consumption by residential, commercial, and industrial customers, in the U.S. in general, and in Ohio, in particular.

The Ohio Department of Energy has been instrumental in increasing the awareness of the public opinion in Ohio about the availability, and implementation of efficient, feasible, and practical conservation

Table 12. Weather Sensitivity of Residential Natural Gas Consumption in Ohio (1970-1980)

MMCF/Per Heating Degree-Day

Year	Cincinnati Gas and Electric	Columbia Gas	Dayton Power and Light	East Ohio Gas
1970	6.43	21.64	5.69	22.95
1971	6.96	24.04	6.04	23.57
1972	6.95	23.81	5.77	24.22
1973	6.78	23.68	5.72	23.04
1974	6.78	23.35	5.58	24.21
1975	6.83	22.73	5.61	24.34
1976	6.34	21.22	5.04	22.52
1977	5.15	18.95	4.79	20.44
1978	5.11	18.00	4.54	19.74
1979	5.10	18.48	4.53	20.68
1980	4.77	17.91	4.28	19.26

Source: O.S.U. Gas Model, monthly reports of four Ohio gas utilities and the Ohio Department of Energy.

measures. ODOE's leadership in providing prudent programs and services aimed to reduce the information and implementation costs to individual customers of the above mentioned types of conservation measures is one reason why conservation efforts in all sectors of Ohio have been much more successful then the national average throughout 1980. We expect 1981 to be an even better year than 1980 in terms of translating the public's need to conserve into effectual conservation.

In view of these considerations, dramatic changes in the behaviors of residential and commercial natural gas requirements are not expected in the near future merely because natural gas supplies have become more abundant. We expect residential and commercial requirements to stabilize around their 1978 or 1979 levels as the economy recovers from the current recession. Major climatic changes, such as a repeat of the winter of 1976, may create temporary increases in residential or commercial demands; but unless, and until, the share of energy expenditures in household budgets are reduced back to 1972 levels through dramatic increases in real per capita incomes, the attainment of 1972 levels of natural gas consumption does not seem to be a likely possibility in the near future.

Alternate Fuel Capability Profile

There were no natural gas curtailments in the September 1980 - August 1981 annual period, and neither the reporting Ohio gas utilities nor the gas pipeline companies projected any curtailments for the September 1981 - August 1982 period. Hence, there is no alternate fuel capability profile to be presented at this time.

Twelve - Month Outlook

On the basis of projected natural gas supplies, and the historically established trends in natural gas requirements, the outlook for the next twelve months indicates no shortages under normal or 10 percent colder than normal weather conditions.

Utility Forecasts

Utility forecasts for the next twelve months project no deficiencies for Ohio under normal or 10 percent colder than normal weather conditions. Aggregate supply and demand projections of the eight major utilities, as presented in Table 13 and Figure 23, indicate a 1.2 percent annual surplus of natural gas supplies over demand. All eight utilities project supply to be in excess of demand during the 1981-82 heating season. Supply and demand projections of the individual utilities, as submitted in their "Monthly Reports of Supply and Demand of Natural Gas", are summarized in Appendix B, Table B-10.

Independent Forecast

The law which created the Ohio Department of Energy requires the development of independent ODOE forecasting capability within the department and the preparation of independent forecasts. Independent natural gas demand forecasts based on two alternate methodologies have been developed by ODOE for the eight major gas utilities serving Ohio. The first methodology employs regression analysis to forecast demand for each major utility as a function of the normal and 10 percent colder than normal temperature scenarios on the basis of the most recent ODOE Form SG-2's submitted by the respective utilities. The second methodology employed by the ODOE to forecast natural gas demand in each major utility service area is based upon Box-Jenkins type time series models of monthly

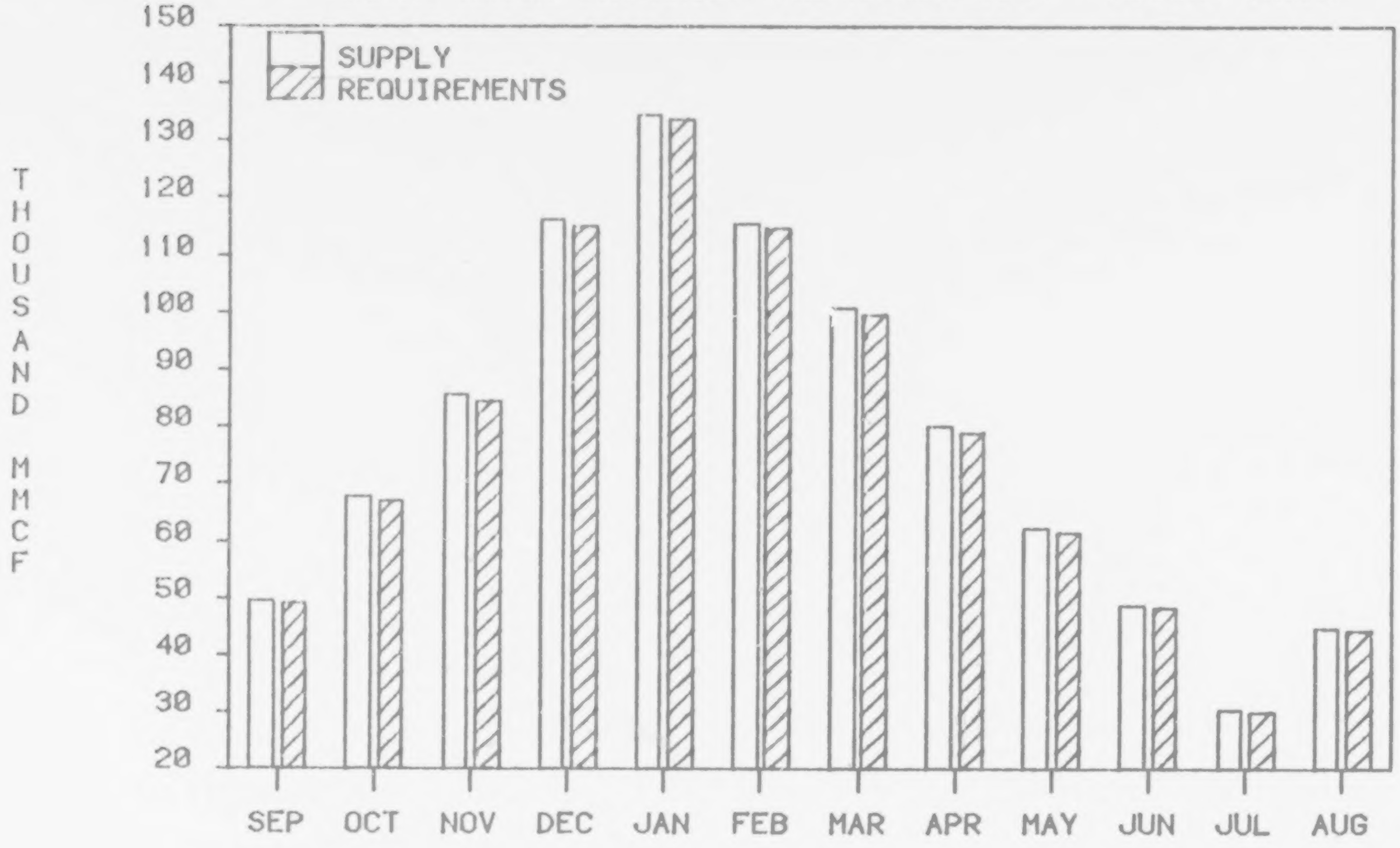
Table 13. Projected Aggregate Supply and Requirements
for Natural Gas for Eight Major Utilities
(September 1981 - August 1982)
(MMCF)

Month/Year	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	6/82	7/82	8/82	Summer Totals	Winter Totals	Annual Totals
Supply	49,763	67,781	85,745	116,376	134,650	115,634	100,934	80,205	62,410	48,883	30,392	44,987	384,421	553,339	937,760
Requirements	49,062	67,017	84,485	115,207	133,572	114,515	99,473	79,085	61,555	48,456	29,998	44,540	379,713	547,252	926,965
Deficiency	-701	-764	-1,260	-1,169	-1,078	-1,119	-1,461	-1,120	-855	-427	-394	-447	-4,708	-6,087	-10,795
Percent Deficiency	-1.4	-1.1	-1.5	-1.0	-0.8	-1.0	-1.5	-1.4	-1.4	-0.9	-1.3	-1.0	-1.2	-1.1	-1.2

Note: A positive deficiency indicates a shortage; a negative deficiency indicates a surplus.

Source: ODOE Form 56-1 of eight major gas utilities and the Ohio Department of Energy.

FIG. 23. PROJECTED SUPPLY AND REQUIREMENTS OF NATURAL GAS
EIGHT MAJOR COMPANIES (SEPTEMBER 1981 - AUGUST 1982)



natural gas requirements of the respective utilities between January 1970 and May 1981. Such models when properly identified yield projections that possess desirable statistical properties and are deemed to be as accurate as, or more accurate than, alternative short-term forecasting techniques. They also have the added flexibility of yielding updated forecasts every time the most recent actual monthly requirements are reported to ODOE. The use of alternative methodologies is expected to provide a double check and reduce forecasting error, and thus, lead to a more accurate and decisive diagnosis of energy requirements of the state.

The results obtained on the basis of both methodologies for the 1981-1982 heating season are presented in Tables 14 through 18. It can be concluded from these tables that no shortages or curtailments of natural gas are expected during the 1981-82 heating season.

Independent forecasts of the four large utilities' total requirements for the annual period November 1981-October 1982, are presented in Appendix B, Tables B-1 through B-4. In Tables B-5 through B-8 of Appendix B we present twelve-month forecasts of sectoral end-use requirements for the state as a whole. The forecasts included in Tables B-5 through B-8 have been adjusted for the long-term historical trends observed in sectoral natural gas requirements in Ohio.

Quantitative Analyses of Historical Natural Gas Requirements in Ohio

As indicated in Figures 16 through 22, the behavior of annual natural gas disposition, in all sectors of Ohio, has displayed distinctly different trends, during the sixties and early seventies, as opposed to the rest of the seventies and the early eighties. Such discontinuous time variant trends characterize the behavior of almost all sectoral energy disposition in Ohio as well as the nation.

Table 14. Independent Forecasts of Natural Gas Supply and Demand for the Eight Major Ohio Gas Utilities
November 1981 - March 1982
(MMCF)

	Normal Weather			10% Colder Than Normal			10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	Demand	Surplus (Deficiency)	Supply	Demand	Surplus (Deficiency)	Supply	Demand	Surplus (Deficiency)
Cincinnati Gas & Electric	56,805	56,492	313	60,266	60,667	(401)	60,266	60,751	(485)
Colombia Gas	208,465	202,863	5,602	221,254	216,369	4,885	221,254	203,479	17,775
Dayton Power & Light	58,456	38,650	19,806	41,081	41,707	(626)	41,081	43,101	(2,020)
East Ohio Gas	209,133	208,764	369	220,826	219,658	1,168	220,826	225,882	(5,056)
National Gas	7,080	5,625	1,455	7,112	5,802	1,310	7,112	6,346	766
Ohio Gas	9,663.4	4,789	4,874.4	9,789.8	5,144	4,645.8	9,789.8	5,138.1	4,651.7
River Gas	3,020	2,948	72	3,181	3,105	76	3,181	3,181	0
West Ohio Gas	9,107	9,252	145	9,696	9,915	(219)	9,696	9,696	0
Total	561,729.4	529,383	32,346.4	573,205.8	562,367	10,838.8	573,205.8	557,574.1	15,631.7

Note: Numbers within parentheses indicate deficiency.

Source: November, 1981, ODOE Form 56-2 of reporting utilities, and the Ohio Department of Energy.

Table 15. Independent Forecasts of Gas Supply
and Demand for Cincinnati Gas and Electric Company
November 1981 - March 1982
(MMCF)

	Normal Weather				10% Colder Than Normal Weather				10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	HDD	Demand	Surplus (Deficiency)	Supply	HDD	Demand	Surplus (Deficiency)	Supply	Demand	Surplus (Deficiency)
November 1981	8,667	636	9,172	(505)	9,227	700	9,798	(571)	9,227	8,796	431
December 1981	12,889	970	12,439	450	13,449	1,067	13,387	62	13,449	12,917	532
January 1982	12,496	1,051	13,231	(735)	13,421	1,156	14,258	(837)	13,421	15,336	(1,915)
February 1982	12,053	888	11,637	416	12,884	977	12,507	327	12,834	12,884	(50)
March 1982	10,700	722	10,013	687	11,335	794	10,717	618	11,335	10,818	517
Total	56,805		56,492	313	60,266		60,667	(401)	60,266	60,751	(485)

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency.

Source: Cincinnati Gas & Electric's November, 1981 ODOE Form SG-2, and the Ohio Department of Energy.

Table 16. Independent Forecasts of Gas Supply
and Demand for Columbia Gas of Ohio
November 1981 - March 1982
(MMCF)

	Normal Weather				10% Colder Than Normal Weather				10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	HDD	Demand	Surplus (Deficiency)	Supply	HDD	Demand	Surplus (Deficiency)	Supply	Demand	Surplus (Deficiency)
November 1981	31,925	570	29,881	2,044	33,341	627	31,515	1,826	33,341	24,076	9,265
December 1981	44,763	951	40,808	3,955	47,263	1,046	43,532	3,731	47,263	33,380	13,883
January 1982	52,216	1,173	47,175	5,041	55,400	1,290	50,530	4,870	55,400	45,237	10,163
February 1982	42,468	1,102	45,138	(2,670)	45,540	1,212	48,293	(2,753)	45,540	53,969	(8,429)
March 1982	37,093	918	39,861	(2,768)	39,710	1,010	42,499	(2,789)	39,710	46,817	(7,107)
Total	208,465		202,863	5,602	221,254		216,369	4,885	221,254	203,479	17,775

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency.

Source: Columbia Gas of Ohio's November, 1981, ODOE Form SG-2, and the Ohio Department of Energy.

Table 17. Independent Forecasts of Gas Supply and Demand for Dayton Power and Light November 1981 - March 1982 (MMCF)

	Normal Weather				10% Colder Than Normal Weather				10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	HDD	Demand	Surplus (Deficiency)	Supply	HDD	Demand	Surplus (Deficiency)	Supply	Demand	Surplus (Deficiency)
November 1981	5,386	482	4,934	-452	5,689	530	5,263	426	5,689	5,832	(143)
December 1981	7,839	865	7,565	-274	8,386	952	8,163	223	8,386	8,408	(22)
January 1982	8,898	1,111	9,255	357	9,597	1,222	10,018	(421)	9,597	10,878	(1,281)
February 1982	9,200	1,135	9,420	220	9,918	1,249	10,203	(285)	9,918	10,333	(415)
March 1982	6,956	852	7,476	520	7,491	937	8,060	(569)	7,491	7,650	(159)
Total	38,279		38,650	371	41,081		41,707	(626)	41,081	43,101	(2,020)

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency.

Source: Dayton Power and Light's November, 1981, ODOE Form SG-2, and the Ohio Department of Energy.

Table 18. Independent Forecasts of Gas Supply
and Demand for East Ohio Gas
November 1981 - March 1982
(MMCF)

	Normal Weather				10% Colder Than Normal Weather				10% Colder Than Normal Weather Supply vs. Time Series Projections of Demand		
	Supply	HDD	Demand	Surplus (Deficiency)	Supply	HDD	Demand	Surplus (Deficiency)	Supply	Demand	Surplus (Deficiency)
November 1981	32,576	534	32,438	138	34,259	587	33,593	666	34,259	35,444	(1,185)
December 1981	43,886	983	42,231	1,655	46,486	1,081	44,368	2,118	46,486	48,231	(1,745)
January 1982	49,009	1,197	46,898	2,111	51,875	1,317	49,515	2,360	51,875	55,775	(3,900)
February 1982	44,620	1,155	45,599	(979)	47,064	1,271	48,512	(1,448)	47,064	47,061	(3)
March 1982	39,042	954	41,598	(2,555)	41,142	1,049	43,670	(2,528)	41,142	39,311	1,831
Total	209,133		208,764	369	220,826		219,658	1,168	220,826	225,882	(5,002)

Notes: Totals may not add due to independent rounding.
HDD - Heating Degree-Days.
Numbers within parentheses indicate deficiency.

Source: East Ohio Gas Company's November, 1981 ODOE Form SG-2, and the Ohio Department of Energy.

Table 19. Ohio Natural Gas Prices in Current Dollars, 1970-1980
($ Per MMBtu)

Year	Residential	Commercial	Industrial
1970	0.84	0.73	0.52
1971	0.96	0.81	0.56
1972	1.02	0.86	0.62
1973	1.08	0.94	0.65
1974	1.23	1.07	0.85
1975	1.51	1.35	1.12
1976	1.79	1.63	1.43
1977	2.23	2.07	1.95
1978	2.43	2.24	2.05
1979	2.78	2.57	2.32
1980[1]	4.23	3.50	3.06

Note: [1]1980 figures represent the first three quarters of 1980 for the east north central region of the United States.

Source: American Gas Association's Gas Facts.

Table 20. Ohio Natural Gas Prices in Constant Dollars, 1970-1980
(Dollars per MMBtu)
(1972 = 100)

Year	Residential	Commercial	Industrial
1970	0.92	0.80	0.57
1971	1.00	0.84	0.58
1972	1.02	0.86	0.62
1973	1.02	0.89	0.61
1974	1.06	0.92	0.73
1975	1.19	1.06	0.88
1976	1.34	1.22	1.07
1977	1.57	1.46	1.38
1978	1.60	1.47	1.35
1979	1.68	1.55	1.40
1980	2.38	1.97	1.72

Note: All prices are stated in terms of 1972 dollars. Unadjusted figures for 1980 represent the first three quarters of 1980 for the east north central region of the United States.

Source: Gas Facts, the American Gas Association; Statistical Abstract of the United States 1980, U.S. Department of Commerce.

At the Ohio Department of Energy we have developed an analytical methodology for the modeling and assessment of discontinuous time variant trends in annual economic data series, in general, and in annual energy data series, in particular. As a result of this development we are in a position to distinguish between temporary deviations from established trends, such as those due to recessions or severe climatic conditions, and changes in established long term trends. Continued application of this methodology will lead to increased understanding of the systemic factors which are responsible for the observed discontinuities in the historical time paths of the corresponding data series. Extraction of such critical information from historical observation will invariably lead to more accurate forecasts of Ohio's future energy requirements by sector or by fuel type, and help identify possible shortages before they develop into critical proportions.

A time path model of historical natural gas end user requirements in Ohio is presented in Tables 21 and 21A, with sectoral end-user forecasts for calendar year 1982 included in Table 22.

The implications of the estimated model are consistent with the discussion of the sectoral behaviors of historical natural gas requirements presented in the preceding pages. More precise quantifications of the relations between unemployment rates, weather conditions, or natural gas prices and historical requirements are under consideration at this time.

SYSTEM: SYST001

Table 21. Integrated Time Path Models of Sectoral Ohio Natural Gas Requirements

MODEL: NGRS
DEP VAR: NGRSPOH

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T RATIO	APPROX PROB>|T|	VARIABLE LABEL
INTERCEPT	1	367.298819	2.190927	167.6454	0.0001	
T	1	9.825845	0.328453	29.9155	0.0001	
T10	1	-17.934991	0.622488	-28.8118	0.0001	
D72	1	32.840539	3.746295	8.7661	0.0001	
D75	1	19.776578	3.847372	5.1403	0.0001	
D7579	1	15.104259	3.355280	4.5016	0.0004	

MODEL: NGCM
DEP VAR: NGCXPOH

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T RATIO	APPROX PROB>|T|	VARIABLE LABEL
INTERCEPT	1	103.577918	1.674894	61.8415	0.0001	
T	1	10.598985	0.318146	33.3149	0.0001	
DUMC	1	-26.690703	2.698128	-9.8923	0.0001	
T12	1	-15.636098	0.583522	-26.7961	0.0001	
D75	1	-19.616823	2.998911	-6.5413	0.0001	
D77	1	-32.655505	3.081382	-10.5977	0.0001	

MODEL: NGIX
DEP VAR: NGIXPOH

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T RATIO	APPROX PROB>|T|	VARIABLE LABEL
INTERCEPT	1	220.605351	3.088938	71.4179	0.0001	
T2	1	34.166193	1.211113	28.2106	0.0001	
T6	1	-31.819023	1.855527	-17.1482	0.0001	
T10	1	26.667946	1.045604	25.5048	0.0001	
T13	1	-54.731110	1.938832	-28.2289	0.0001	
D75	1	-57.540214	6.503919	-8.8470	0.0001	
D77	1	-67.208614	7.149714	-9.4002	0.0001	
DUM13	1	38.798452	7.750457	5.0060	0.0002	

MODEL: NGOX
DEP VAR: NGOXPOH

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T RATIO	APPROX PROB>|T|	VARIABLE LABEL
INTERCEPT	1	13.114611	0.943148	13.9051	0.0001	
T6	1	5.581408	0.436223	12.7949	0.0001	
T10	1	-8.732955	0.675098	-12.9358	0.0001	
DUM13	1	14.713333	2.659567	5.5322	0.0001	

Table 21. Integrated Time Path Models of Sectoral Ohio Natural Gas Requirements (Cont'd)

MODEL: NGIT
DEP VAR: NGITPOH

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T RATIO	APPROX PROB>|T|	VARIABLE LABEL
INTERCEPT	1	704.596700	4.277341	164.7277	0.0001	
T	1	20.424830	0.561853	36.3526	0.0001	
T2	1	34.166193	1.543872	22.1302	0.0001	
T3	1	-26.237615	2.296133	-11.4269	0.0001	
T12	1	-15.636098	0.799020	-19.5691	0.0001	
T13	1	-54.731110	2.471535	-22.1446	0.0001	
D72	1	32.840539	5.129826	6.4019	0.0002	
D75	1	-77.157037	8.067809	-9.5636	0.0001	
D76	1	19.776578	5.268231	3.7539	0.0056	
D77	1	-99.864119	8.975528	-11.1263	0.0001	
D7879	1	15.104259	4.594407	3.2875	0.0111	
DUMC	1	-26.690703	3.694564	-7.2243	0.0001	
DUM13	1	53.511785	10.370674	5.1599	0.0009	

SYSTEM: SYST001

Table 21-A. (Statistical Summary) Integrated Time Path Models of Sectoral Ohio Natural Gas Requirements

COVARIANCE ACROSS MODELS

	NGRS.NGRSPOH	NGCM.NGCXPOH	NGIX.NGIXPOH	NGOX.NGOXPOH	NGTT.NGTTPOH
NGRS.NGRSPOH	15.87894881	-4.19151568	1.76539600	3.41680938	6.43552493
NGCM.NGCXPOH	-4.19151568	7.45752380	-2.51365096	-1.52771139	-0.93154398
NGIX.NGIXPOH	1.76539600	-2.51365096	26.70999825	1.78898676	17.25840252
NGOX.NGOXPOH	3.41680938	-1.52771139	1.78898676	7.07505941	4.64100927
NGTT.NGTTPOH	6.43552493	-0.93154398	17.25840252	4.64100927	26.63001310

CORRELATION ACROSS MODELS

	NGRS.NGRSPOH	NGCM.NGCXPOH	NGIX.NGIXPOH	NGOX.NGOXPOH	NGTT.NGTTPOH
NGRS.NGRSPOH	1.00000000	-0.38517926	0.08572240	0.32236273	0.31295898
NGCM.NGCXPOH	-0.38517926	1.00000000	-0.17810279	-0.21031921	-0.06610288
NGIX.NGIXPOH	0.08572240	-0.17810279	1.00000000	0.13013831	0.64710980
NGOX.NGOXPOH	0.32236273	-0.21031921	0.13013831	1.00000000	0.33811287
NGTT.NGTTPOH	0.31295898	-0.06610288	0.64710980	0.33811287	1.00000000

INV CORRELATION ACROSS MODELS

	NGRS.NGRSPOH	NGCM.NGCXPOH	NGIX.NGIXPOH	NGOX.NGOXPOH	NGTT.NGTTPOH
NGRS.NGRSPOH	1.42095395	0.53490165	0.38019197	-0.19584032	-0.58915157
NGCM.NGCXPOH	0.53490165	1.29517883	0.43768989	0.18790833	-0.42855486
NGIX.NGIXPOH	0.38019197	0.43768989	1.92816289	0.19294712	-1.40302293
NGOX.NGOXPOH	-0.19584032	0.18790833	0.19294712	1.23615333	-0.46910606
NGTT.NGTTPOH	-0.58915157	-0.42855486	-1.40302293	-0.46910606	2.22257224

INV COVARIANCE ACROSS MODELS

	NGRS.NGRSPOH	NGCM.NGCXPOH	NGIX.NGIXPOH	NGOX.NGOXPOH	NGTT.NGTTPOH
NGRS.NGRSPOH	0.08948665	0.04915478	0.01846100	-0.01847678	-0.02865039
NGCM.NGCXPOH	0.04915478	0.17367411	0.03101218	0.02586924	-0.03041049
NGIX.NGIXPOH	0.01846100	0.03101218	0.07218881	0.01403577	-0.05260683
NGOX.NGOXPOH	-0.01847678	0.02586924	0.01403577	0.17471985	-0.03417593
NGTT.NGTTPOH	-0.02865039	-0.03041049	-0.05260683	-0.03417593	0.08346118

WARNING: DEGREES OF FREEDOM NOT ADJUSTED FOR RESTRICTIONS

WEIGHTED MEAN SQUARE ERROR FOR SYSTEM = 1.402858 WITH 82 DFS

WEIGHTED R-SQUARE FOR SYSTEM = 0.9931
THIS IS THE R-SQUARE THAT CORRESPONDS TO THE APPROXIMATE F TEST ON ALL NON-INTERCEPT PARAMETERS IN THE SYSTEM.

Table 22. Independent Forecast of Annual Natural Gas
End Use Requirements. Calendar Year 1982
(MMCF)

	Actual* 1981	Lower 95% Confidence Limit	Forecast** 1982	Upper 95% Confidence Limit	Forecast % Change
Residential	376	358	370	382	-1.6
Commercial	160	146	155	164	-3.1
Industrial	302	280	295	310	-2.3
Other	20	11	20	29	0
Total	858	820***	840	860***	-2.1

Source: Ohio Department of Energy.

* Based upon the first nine months of 1981.

** Forecasts are up dated for 1981 actuals. Industrial forecast is based on the presumption that average unemployment during 1982 will remain around 8.5% during first half of 1982, and improve during second half to around 7.0%.

*** The confidence limits for the total are not equal to the sum of the confidence limits of its components by definition of the statistical concepts involved.

APPENDIX A

FORECAST OF ELECTRICITY DEMAND BY UTILITY
AND SECTOR

Table A-1. Allegheny Power System:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
November	2,674	2,732	2.2	2,669	-0.2
December	2,947	3,026	2.7	2,914	-1.1
January	3,205	3,262	1.8	3,122	-2.6
February	2,759	2,841	3.0	2,811	1.9
March	2,936	2,865	-2.4	2,859	-2.6
April	2,483	2,663	7.2	2,550	2.7
May	2,498	2,657	6.4	2,541	1.7
June	2,540	2,615	3.0	2,513	-1.1
July	2,683	2,673	-0.4	2,625	-2.2
August	2,626	2,791	6.3	2,687	2.3
September	2,483	2,620	5.5	2,532	2.0
October		2,799		2,691	

*Source of demand figures is ERA Form 119-M. October actual figure is not available.

Table A-2. American Electric Power:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs. Actual)
November	6,804	7,226	6.2	6,851	0.7
December	7,141	8,140	14.0	7,144	0.0
January	7,765	8,875	14.3	7,776	0.1
February	8,421	8,214	-2.5	8,421	0.0
March	7,323	7,890	7.7	7,541	3.0
April	7,548	7,063	-6.4	7,712	2.2
May	6,257	7,007	12.0	6,532	4.4
June	6,357	6,932	9.0	6,571	3.4
July	6,806	7,306	7.3	6,879	1.1
August	7,202	7,621	5.8	7,267	0.9
September	6,987	7,111	1.8	7,136	2.1
October		7,319		6,587	

*Source of demand figures is ERA Form 119-M. October actual figure is not available.

Table A-3. Cincinnati Gas and Electric: Forecast of Electric Energy Demand (1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
November	1,209	1,261	4.3	1,223	1.2
December	1,369	1,461	6.7	1,354	-1.1
January	1,463	1,497	2.3	1,443	-1.4
February	1,264	1,301	2.9	1,328	5.1
March	1,290	1,343	4.1	1,327	2.9
April	1,119	1,165	4.1	1,149	2.7
May	1,169	1,237	5.8	1,175	0.5
June	1,374	1,407	2.4	1,320	-3.9
July	1,501	1,594	6.2	1,540	2.6
August	1,414	1,619	14.5	1,508	6.6
September	1,202	1,321	9.9	1,260	4.8
October		1,212		1,218	

*Source of demand figures is ERA Form 119-M. October actual figure is not available.

Table A-4. Cleveland Electric Illuminating: Forecast of Electric Energy Demand (1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs. Actual)
November	1,487	1,554	4.5	1,486	-0.1
December	1,595	1,681	5.4	1,579	-1.0
January	1,678	1,729	3.0	1,675	-0.2
February	1,517	1,607	5.9	1,555	2.5
March	1,622	1,679	3.5	1,616	-0.4
April	1,494	1,553	2.6	1,458	-2.4
May	1,528	1,587	3.9	1,457	-4.6
June	1,616	1,653	2.3	1,496	-7.4
July	1,645	1,687	2.6	1,575	-4.3
August	1,609	1,720	6.9	1,598	-0.7
September	1,485	1,619	9.0	1,461	-1.6
October		1,621		1,503	

*Source of demand figures is ERA Form 119-M. October actual figure is not available.

Table A-5. Dayton Power and Light:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
November	871	911	4.6	884	1.5
December	974	1,031	5.9	970	-0.4
January	1,059	1,088	2.7	1,055	-0.4
February	923	1,004	8.8	960	4.0
March	955	970	1.6	962	0.7
April	805	861	7.0	821	2.0
May	803	857	6.7	795	-1.0
June	897	906	8.8	865	-3.6
July	972	1,000	1.0	977	0.5
August	934	987	2.9	959	2.7
September	833	977	5.7	848	1.8
October		923	17.3	870	

*Source of demand figures is ERA Form 119 M. October actual figure is not available.

Table A-6. Ohio Edison System:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
November	1,998	2,074	3.8	2,087	4.5
December	2,182	2,158	1.1	2,244	2.8
January	2,265	2,370	4.6	2,366	4.5
February	2,016	2,136	6.0	2,155	6.9
March	2,163	2,234	3.3	2,247	3.9
April	1,914	2,041	6.6	2,002	4.6
May	1,922	2,032	5.7	1,989	3.5
June	2,033	2,045	0.6	2,058	1.2
July	2,143	2,157	0.7	2,180	1.7
August	2,066	2,310	11.8	2,176	5.3
September	1,956	2,078	6.2	2,055	5.1
October		2,161		2,203	

*Source of demand figures is ERA Form 119-M. October actual figure is not available.

Table A-7. Ohio Valley Electric Corporation:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-81)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)
November	577	1,416	145.4
December	596	1,468	146.3
January	596	1,429	139.8
February	539	1,259	133.6
March	594	1,424	139.7
April	576	1,373	138.4
May	596	1,448	143.0
June	578	1,357	134.8
July	596	1,480	148.3
August	595	1,434	141.0
September	578	1,342	132.2
October		1,501	

*Source of demand figures is ERA Form 119-M. October actual figure is not available.

Table A-8. Toledo Edison Company:
Forecast of Electric Energy Demand
(1000 MWH)

	Actual Demand* (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs. Actual)
November	640	644	0.6	639	-0.2
December	700	683	-2.4	680	-2.9
January	741	702	-5.3	734	-0.9
February	652	667	2.3	656	0.6
March	668	665	-0.4	670	1.5
April	572	615	7.5	580	1.4
May	591	610	3.2	587	-0.7
June	613	618	0.8	605	-1.3
July	655	638	-2.6	649	-0.9
August	645	660	2.3	659	2.2
September	592	629	6.3	602	1.7
October		631		658	

*Source of demand figures is ERA Form 119-M. October actual figure is not available.

Table A-9. Forecast of Ohio Electricity Demand - Residential Sector (1000 MWH)

Month	Lower 95% Confidence Limit	Forecast (1981-1982)	Upper 95% Confidence Limit	Actual (1980-1981)	Forecast Percentage Change
November	1,767.5	2,075.7	2,383.8	2,193.3	-5.4
December	2,255.9	2,574.7	2,893.4	2,699.3	-4.6
January	2,826.2	3,155.2	3,484.2	3,333.8	-5.2
February	2,559.7	2,898.6	3,237.6	2,962.9	-2.2
March	2,231.4	2,580.0	2,928.6	2,603.3	-0.9
April	1,846.8	2,204.8	2,562.8	2,179.5	1.2
May	1,605.8	1,973.0	2,340.1	1,985.8	-0.6
June	1,666.7	2,042.8	2,418.9	2,065.1	-1.1
July	2,067.5	2,452.3	2,837.2	2,521.2	-2.7
August	2,021.7	2,415.1	2,808.5	2,370.1	1.9
September	1,844.3	2,246.0	2,647.7	2,197.2	2.2
October	1,459.4	1,932.0	2,404.7	1,960.3	-1.4

Notes: 1. The forecast is based on the monthly comparative summary statistics of the Ohio Electric Utilities Institute for eight major investor-owned electric utilities (excluding OVEC).

2. Forecast by ODOE.

Table A-10. Forecast of Ohio Electricity Demand - Commercial Sector (1000 MWH)

Month	Lower 95% Confidence Limit	Forecast (1981-1982)	Upper 95% Confidence Limit	Actual (1980-1981)	Forecast Percentage Change
November	1,495.6	1,632.1	1,768.7	1,579.3	3.3
December	1,612.2	1,764.0	1,915.7	1,721.2	2.5
January	1,739.2	1,904.8	2,070.4	1,902.9	0.1
February	1,695.2	1,873.5	2,051.8	1,793.0	4.5
March	1,554.1	1,744.3	1,934.5	1,700.4	2.6
April	1,452.4	1,653.9	1,855.3	1,594.1	3.8
May	1,391.0	1,603.1	1,815.1	1,565.2	2.4
June	1,547.2	1,769.3	1,991.4	1,758.5	0.6
July	1,717.8	1,949.6	2,181.4	1,989.6	-2.0
August	1,721.6	1,962.6	2,203.7	1,906.0	3.0
September	1,652.0	1,902.0	2,152.0	1,849.5	2.8
October	1,432.9	1,703.0	1,973.1	1,621.2	5.0

Notes: 1. The forecast is based on the monthly comparative summary statistics of the Ohio Electric Utilities Institute for eight major investor-owned electric utilities (excluding OVEC).

2. Forecast by ODOE.

Table A-11. Forecast of Ohio Electricity Demand - Industrial Sector
(1000 MWH)

Month	Lower 95% Confidence Limit	Forecast (1981-1982)	Upper 95% Confidence Limit	Actual (1980-1981)	Forecast Percentage Change
November	3,542.6	3,831.9	4,121.2	3,823.2	0.2
December	3,407.9	3,762.3	4,116.6	3,918.8	-4.0
January	3,402.9	3,812.1	4,221.3	3,861.1	-1.3
February	3,329.2	3,786.7	4,244.2	3,952.8	-4.2
March	3,422.9	3,924.0	4,425.2	4,048.0	-3.1
April	3,328.9	3,870.2	4,411.5	3,927.2	-1.5
May	3,318.2	3,896.9	4,475.6	3,930.4	-0.9
June	3,279.1	3,892.9	4,506.6	4,006.0	-2.8
July	3,108.7	3,755.7	4,402.7	3,898.7	-3.7
August	3,207.8	3,886.3	4,564.9	4,011.1	-3.1
September	3,171.1	3,879.9	4,588.6	3,843.9	0.9
October	3,203.7	3,994.9	4,686.1	3,875.3	1.8

Notes: 1. The forecast is based on the monthly comparative summary statistics of the Ohio Electric Utilities Institute for eight major investor-owned electric utilities (excluding OVEC).

2. Forecast by ODOE.

Table A-12. Forecast of Ohio Electricity Demand - All Sectors
(1000 MWH)

Month	Lower 95% Confidence Limit	Forecast (1981-1982)	Upper 95% Confidence Limit	Actual (1980-1981)	Forecast Percentage Change
November	7,135.8	7,771.2	8,406.7	8,066.3	-3.7
December	7,485.0	8,277.6	9,070.2	8,845.4	-6.4
January	8,040.1	8,963.5	9,886.8	9,605.6	-6.7
February	7,768.6	8,806.4	9,844.1	9,210.9	-4.4
March	7,407.5	8,548.3	9,689.0	8,852.2	-3.4
April	6,742.2	7,977.4	9,212.6	8,121.4	-1.8
May	6,405.2	7,728.1	9,051.0	7,872.1	-1.8
June	6,433.1	7,838.3	9,243.4	8,236.6	-4.8
July	6,660.9	8,143.7	9,626.6	8,810.8	-7.6
August	6,871.4	8,428.0	9,984.7	8,669.6	-2.8
September	6,678.3	8,305.5	9,932.6	8,298.9	-0.1
October	6,073.1	7,788.2	9,503.3	7,877.8	-1.1

Notes: 1. The forecast is based on the monthly comparative summary statistics of the Ohio Electric Utilities Institute for eight major investor-owned electric utilities (excluding OVEC).

2. Forecast by ODOE.

APPENDIX B

FORECAST OF NATURAL GAS DEMAND BY UTILITY

Table B-1. Cincinnati Gas and Electric:
Forecast of Natural Gas Requirements
(MMCF)

	Actual Demand (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
November	9,648	8,667	-10.17	8,796.14	-8.83
December	12,846	12,889	0.33	12,916.9	0.55
January	15,164	12,496	-17.59	15,336.5	1.44
February	11,652	12,053	3.44	12,883.5	10.57
March	10,326	10,700	3.62	10,818.2	4.77
April	5,461	6,788	24.30	6,661.67	21.99
May	5,480	5,180	-5.47	4,680.99	-14.60
June	3,814	4,008	5.09	3,624.35	-4.97
July	3,504	3,958	12.96	3,465.21	-1.11
August	3,589	3,951	10.09	3,899.34	8.65
September	3,692	4,091	10.81	3,730.71	1.05
October	5,881	5,644	-4.03	6,031.87	2.57

Source: SG-2. Forms of the reporting utility and the Ohio Department of Energy.

Table B-2. Columbus Gas of Ohio:
Forecast of Natural Gas Requirements
(MMCF)

	Actual Demand (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
November	34,423	31,925	-7.26	32,596.9	-5.30
December	45,393	44,763	-1.39	44,759.1	-1.40
January	53,771	52,216	-2.89	53,677.3	-0.17
February	41,871	42,468	1.43	46,638.1	11.39
March	37,387	37,093	-0.79	38,813.2	3.81
April	23,033	27,095	17.64	27,371.2	18.83
May	20,413	19,603	-3.79	18,796.6	-7.92
June	14,475	14,614	0.96	14,039.7	-3.01
July	13,489	13,563	.55	13,288.1	-1.93
August	13,532	15,215	12.44	14,140.3	4.5
September	14,758	15,712	6.46	14,733.5	-.17
October	22,794	23,821	4.51	23,171.3	1.66

Source: SG-2. Forms of the reporting utility and the Ohio Department of Energy.

Table B-3. Dayton Power and Light:
Forecast of Natural Gas Requirements
(MMCF)

	Actual Demand (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs. Actual)
November	6,058	5,386	-11.09	5,661.70	-6.54
December	7,615	7,839	2.94	8,313.50	9.17
January	10,815	8,898	-17.73	10,826.3	0.10
February	9,333	9,200	-1.43	10,303.8	10.40
March	7,064	6,956	-1.53	7,634.38	8.07
April	4,138	5,560	34.36	5,324.10	28.66
May	3,540	3,312	-6.44	3,331.85	-5.88
June	2,130	2,164	1.60	2,200.81	3.32
July	1,817	1,802	-0.83	1,908.38	5.03
August	1,895	1,881	-0.74	1,972.67	4.10
September	2,053	1,995	-2.83	2,205.29	7.42
October	*	3,463		3,367.80	

Source: SG-2. Forms of the reporting utility and the Ohio Department of Energy.

*Actuals not available at this time.

Table B-4. East Ohio Gas:
Forecast of Natural Gas Requirements
(MMCF)

	Actual Demand (1980-1981)	Utility Forecast (1981-1982)	Forecast % Change (Utility Forecast vs. Actual)	ODOE Forecast (1981-1982)	Forecast % Change (ODOE Forecast vs.Actual)
November	34,518	32,576	-5.63	35,496.7	2.84
December	46,775	43,886	-6.18	48,258.4	3.17
January	53,832	49,009	-8.96	55,789.4	3.64
February	40,327	44,620	10.65	47,068.5	16.72
March	38,896	59,042	0.38	39,314.3	1.08
April	32,322	34,763	7.55	32,829.4	1.57
May	27,996	29,485	5.32	25,160.4	-10.13
June	22,104	23,905	8.15	20,752.5	-6.11
July	20,875	21,573	3.34	18,910.8	-9.41
August	21,084	21,435	1.66	20,117.1	-4.59
September	22,837	23,250	1.82	21,554.6	-5.60
October	*	29,705		29,259.1	

Source: SG-2. Forms of the reporting utility and the Ohio Department of Energy.

*Actuals not available at this time.

Table B-5. Independent Forecast of Ohio Natural Gas
End User Requirements-Residential Sector
(MMCF)

Month	Lower 95% Confidence Limit	Forecast (1981-1982)	Upper 95% Confidence Limit	Actual (1980-1981)	Forecast Percentage Change
November	23,926	31,902	39,877	33,960	-6.1%
December	44,039	52,439	60,839	52,156	0.5%
January	59,889	68,289	76,689	72,449	-5.7%
February	57,071	65,471	73,871	61,561	6.4%
March	43,181	51,581	59,981	49,886	3.4%
April	26,800	35,200	43,600	30,965	13.7%
May	14,701	19,601	24,501	21,548	-9.0%
June	7,641	10,188	12,735	11,236	-9.3%
July	5,941	7,921	9,901	8,598	-7.9%
August	5,635	7,513	9,391	7,695.3	-2.4%
September	6,262	8,350	10,438	9,087	-8.1%
October	12,907	17,210	21,513	*	*

*Figures not available.

Table B-6. Independent Forecast of Ohio Natural Gas End User Requirements-Commercial Sector (MMCF)

Month	Lower 95% Confidence Limit	Forecast (1981-1982)	Upper 95% Confidence Limit	Actual (1980-1981)	Forecast Percentage Change
November	10,180	13,395	16,610	14,548	-7.93%
December	18,304	21,604	24,904	22,197	-2.67%
January	24,108	27,408	30,708	30,341	-9.67%
February	23,361	26,661	29,961	26,455	.78%
March	18,039	21,339	24,639	21,190	.70%
April	12,179	15,479	18,779	12,834	20.61%
May	6,851	9,014	11,177	8,532	5.65%
June	4,030	5,303	6,576	4,935	7.46%
July	3,253	4,280	5,307	4,027	6.28%
August	3,162	4,161	5,160	3,820	8.93%
September	3,308	4,352	5,396	4,281	1.66%
October	5,581	7,344	9,107	*	*

*Figures not available.

Table B-7. Independent Forecast of Ohio Natural Gas
End User Requirements-Industrial Sector
(MMCF)

Month	Lower 95% Confidence Limit	Forecast (1981-1982)	Upper 95% Confidence Limit	Actual (1980-1981)	Forecast Percentage Change
November	21,125	25,625	30,125	26,501	-3.3%
December	23,368	27,868	32,368	29,781	-6.4%
January	25,493	29,993	34,493	32,697	-8.3%
February	24,636	29,136	33,636	29,857	-2.4%
March	24,128	28,628	33,128	27,930	+2.5%
April	22,271	26,771	31,271	24,867	+7.6%
May	20,424	24,924	29,424	24,330	+2.4%
June	19,029	23,529	28,029	22,415	+5.0%
July	17,177	21,677	26,177	19,841	+9.2%
August	18,940	23,440	27,940	20,177.8	+16.5%
September	19,889	24,389	28,889	20,444	+19.3%
October	22,441	26,941	31,441	*	*

*Figures not available.

Table B-8. Independent Forecast of Ohio Natural Gas Requirements-Total-All Sectors (MMCF)

Month	Lower 95% Confidence Limit	Forecast (1981-1982)	Upper 95% Confidence Limit	Actual (1980-1981)	Forecast Percentage Change
November	70,904	85,904	100,904	88,547	-2.98%
December	101,954	116,954	131,954	117,473	-0.44%
January	122,935	137,935	152,935	139,399	-1.05%
February	102,939	117,939	132,939	108,030	9.17%
March	81,756	96,756	111,756	98,145	-1.42%
April	56,858	71,073	85,288	67,946	4.60%
May	40,731	50,914	61,097	59,991	-15.13%
June	32,011	40,014	48,017	44,672	-10.43%
July	29,935	37,419	44,903	41,827	-10.54%
August	31,929	39,911	47,893	41,762	-4.43%
September	33,657	42,071	50,485	45,443	-7.42%
October	50,726	63,408	76,090	*	*

*Figures not available.

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Table B-9. Projected Supply and Demand for Eight Major Ohio Natural Gas Utilities. (MMCF)

COMPANY: CINN. GAS & ELEC.

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	6/82	7/82	SUMMER	WINTER	YEAR
SUPPLY	3989	4062	6162	9393	12990	13289	11566	10663	7653	5368	4215	4050	35479	57699	93178
DEMAND	3989	4062	6162	9393	12990	13289	11566	10663	7653	5368	4215	4050	35479	57699	93178
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: COLUMBIA GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	6/82	7/82	SUMMER	WINTER	YEAR
SUPPLY	15498	16082	24267	33415	46320	57388	44776	39421	28159	20608	15577	0	120191	221318	341509
DEMAND	15498	16082	24267	33415	46320	57388	44776	39421	28159	20608	15577	0	120191	221318	341509
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: DAYTON POWER & LIGHT

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	6/82	7/82	SUMMER	WINTER	YEAR
SUPPLY	1921	2045	3466	5386	7839	8898	9200	6956	5560	3312	2164	1802	20270	38279	58549
DEMAND	1921	2045	3466	5386	7839	8898	9200	6956	5560	3312	2164	1802	20270	38279	58549
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: EAST OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	6/82	7/82	SUMMER	WINTER	YEAR
SUPPLY	22926	24760	30217	32665	43524	68575	43949	38550	34629	29809	24300	22151	188772	207263	396035
DEMAND	22926	24760	30217	32665	43524	68575	43949	38550	34629	29809	24300	22151	188772	207263	396035
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table B-9. Projected Supply and Demand for Eight Major Ohio Natural Gas Utilities (Cont'd) (MMCF)

COMPANY: NATIONAL GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	6/82	7/82	SUMMER	WINTER	YEAR
SUPPLY	1185	1165	1100	1083	1274	1435	1477	1480	1370	1220	1150	1195	8385	6749	15134
DEMAND	1078	1028	1015	1023	1098	1198	1148	1126	982	1053	1026	1007	7189	5593	12782
DEFICIENCY	107	137	85	60	176	-237	-329	-356	-388	167	124	188	1196	1156	2352
% DEFICIENCY	9.9%	13.3%	8.4%	-5.9%	16.0%	-19.8%	-28.7%	31.6%	39.5%	-15.9%	-12.1%	18.7%	16.6%	20.7%	18.5%

COMPANY: OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	6/82	7/82	SUMMER	WINTER	YEAR
SUPPLY	668	934	1223	1969	2024	2004	1794	1949	1284	1043	735	609	6496	9720	16216
DEMAND	295	370	566	769	1031	1163	1004	842	552	355	432	403	2951	4789	7740
DEFICIENCY	373	564	679	1200	993	841	790	1107	732	688	303	206	3545	4931	8476
% DEFICIENCY	126.4%	152.4%	126.8%	160.2%	96.3%	72.3%	78.7%	131.5%	132.6%	193.8%	70.1%	51.1%	120.1%	103.0%	109.5%

COMPANY: RIVER GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	6/82	7/82	SUMMER	WINTER	YEAR
SUPPLY	135	182	309	458	617	720	659	518	329	261	172	143	1531	2972	4503
DEMAND	135	182	309	458	617	720	659	518	329	261	172	143	1531	2972	4503
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

COMPANY: WEST OHIO GAS

PROJECTED SUPPLY AND DEMAND (IN MMCF)

MONTH/YEAR	8/81	9/81	10/81	11/81	12/81	1/82	2/82	3/82	4/82	5/82	6/82	7/82	SUMMER	WINTER	YEAR
SUPPLY	547	573	1037	1396	1788	2341	2217	1597	1221	789	570	442	5179	9339	14518
DEMAND	547	573	1037	1396	1788	2341	2217	1597	1221	789	570	442	5179	9339	14518
DEFICIENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% DEFICIENCY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

SOURCE: S-G Forms of reporting Utilities and ODOE

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